Majestic Mathematics

A Textbook of Mathematics

3

Teacher's Resource Book

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Contents

Chapter 1. Numbers up to 9999

Recap

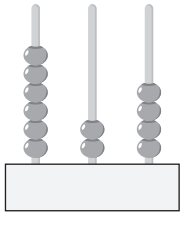
1.

Column A	Column B
(a) The smallest 2-digit number	10
(b) The largest 2-digit number	99
(c) The smallest 3-digit number	100
(d) The largest 3-digit number	999
(e) The number more than 500 and less than 600 whose all digits are same	555
(f) One more than 755	756
(g) One less than 888	887

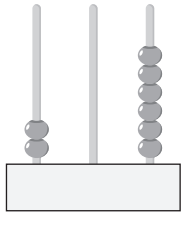
2. (a) 18 — Eighteen
(b) 460 — Four hundred sixty
(c) 211 — Two hundred eleven
(d) 740 — Seven hundred forty
(e) 354 — Three hundred fifty-four
(f) 848 — Eight hundred forty-eight

3. (a) Forty-nine — 49
(b) Ninety-nine — 99
(c) Two hundred sixty-five — 265
(d) Four hundred ninety-nine — 499

4. (a)



(b)



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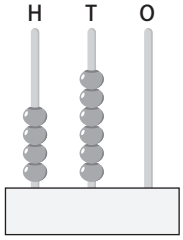


5. (a) 243 = 40 (b) 703 = 700
(c) 820 = 0

6. (a) 42 > 24 (b) 284 < 482
(c) 573 > 571

7. (a) 225, 249, 101, (73), 590, (740)
(b) 123, 321, 132, 231, (102), (403)

8. (a) 7, 4, 5
Smallest number = 457
Greatest number = 754
(b) 8, 2, 4
Smallest number = 248
Greatest number = 842

9.

Exercise 1.1

1. (a) 3284 =
Three thousand two hundred eighty-four
(b) 5273 =
Five thousand two hundred seventy-three
(c) 8400 = Eight thousand four hundred
(d) 9327 =
Nine thousand three hundred twenty-seven
(e) 7254 = Seven thousand two hundred fifty-four
(f) 7035 = Seven thousand thirty-five

2. (a) 6357 =
6 thousands + 3 hundreds + 5 tens + 7 ones
(b) 7089 =
7 thousands + 0 hundreds + 8 tens + 9 ones
(c) 9999 =
9 thousands + 9 hundreds + 9 tens + 9 ones
(d) 7500 =
7 thousands + 5 hundreds + 0 tens + 0 ones

3. (a) 5736 (c) 1009
(e) 8030 (g) 7249
(h) 6000

4. (a) 2 4 8 (b) 1 9 5 0
(c) 1 5 7 2

5. (a) Five thousand three hundred forty-five = 5,345
(b) Eight thousand one hundred sixty = 8,160
(c) Four thousand four hundred = 4,400
(d) Nine thousand forty-seven = 9,047
(e) Three thousand twenty = 3,020
(f) One thousand one hundred eleven = 1,111

6. (a) 2,463 = Two thousand four hundred sixty-three
(b) 7,025 = Seven thousand twenty-five
(c) 4,905 = Four thousand nine hundred five

7. (a) 2 1 35 (b) 8 0 3 0 (c) 7 8 9 9

8. (a)

1001	1002	1003	1004	1005	1006	1007	1008	1009	1010
1011	1012	1013	1014	1015	1016	1017	1018	1019	1020
1021	1022	1023	1024	1025	1026	1027	1028	1029	1030
1031	1032	1033	1034	1035	1036	1037	1038	1039	1040
1041	1042	1043	1044	1045	1046	1047	1048	1049	1050
1051	1052	1053	1054	1055	1056	1057	1058	1059	1060
1061	1062	1063	1064	1065	1066	1067	1068	1069	1070
1071	1072	1073	1074	1075	1076	1077	1078	1079	1080
1081	1082	1083	1084	1085	1086	1087	1088	1089	1090
1091	1092	1093	1094	1095	1096	1097	1098	1099	1100

(b)

2221	2222	2223	2224	2225	2226	2227	2228	2229	2230
2231	2232	2233	2234	2235	2236	2237	2238	2239	2240
2241	2242	2243	2244	2245	2246	2247	2248	2249	2250
2251	2252	2253	2254	2255	2256	2257	2258	2259	2260
2261	2262	2263	2264	2265	2266	2267	2268	2269	2270
2271	2272	2273	2274	2275	2276	2277	2278	2279	2280
2281	2282	2283	2284	2285	2286	2287	2288	2289	2290
2291	2292	2293	2294	2295	2296	2297	2298	2299	2300
2301	2302	2303	2304	2305	2306	2307	2308	2309	2310
2311	2312	2313	2314	2315	2316	2317	2318	2319	2320

9. (a)

3551	3552	3553	3554	3555	3556	3557	3558	3559	3560
3561	3562	3563	3564	3565	3566	3567	3568	3569	3570
3571	3572	3573	3574	3575	3576	3577	3578	3579	3580
3581	3582	3583	3584	3585	3586	3587	3588	3589	3590
3591	3592	3593	3594	3595	3596	3597	3598	3599	3600
3601	3602	3603	3604	3605	3606	3607	3608	3609	3610
3611	3612	3613	3614	3615	3616	3617	3618	3619	3620
3621	3622	3623	3624	3625	3626	3627	3628	3629	3630
3631	3632	3633	3634	3635	3636	3637	3638	3639	3640
3641	3642	3643	3644	3645	3646	3647	3648	3649	3650

(b)

8901	8902	8903	8904	8905	8906	8907	8908	8909	8910
8911	8912	8913	8914	8915	8916	8917	8918	8919	8920
8921	8922	8923	8924	8925	8926	8927	8928	8929	8930
8931	8932	8933	8934	8935	8936	8937	8938	8939	8940
8941	8942	8943	8944	8945	8946	8947	8948	8949	8950
8951	8952	8953	8954	8955	8956	8957	8958	8959	8960
8961	8962	8963	8964	8965	8966	8967	8968	8969	8970
8971	8972	8973	8974	8975	8976	8977	8978	8979	8980
8981	8982	8983	8984	8985	8986	8987	8988	8989	8990
8991	8992	8993	8994	8995	8996	8997	8998	8999	9000

(c)

9351	9352	9353	9354	9355	9356	9357	9358	9359	9360
9361	9362	9363	9364	9365	9366	9367	9368	9369	9370
9371	9372	9373	9374	9375	9376	9377	9378	9379	9380
9381	9382	9383	9384	9385	9386	9387	9388	9389	9390
9391	9392	9393	9394	9395	9396	9397	9398	9399	9400
9401	9402	9403	9404	9405	9406	9407	9408	9409	9410
9411	9412	9413	9414	9415	9416	9417	9418	9419	9420
9421	9422	9423	9424	9425	9426	9427	9428	9429	9430
9431	9432	9433	9434	9435	9436	9437	9438	9439	9440
9441	9442	9443	9444	9445	9446	9447	9448	9449	9450

Exercise 1.2

1. 1024, 2031, 2037, 3038, 3018, 4015
   4074, 5239, 5390, 6108, 6815, 1370
   1437, 2532, 4681, 9045, 9452, 3453

2. 1113, 1429, 2942, 3475, 2892, 3020
   4573, 4824, 5629, 5040, 6666, 4386
   6999, 7001, 7090, 8247, 8648, 9533

3. (a) 7762, 7764, 7766, 7768, 7770, 7772, 7774.
   (b) 6995, 7000, 7005, 7010, 7015, 7020, 7025.
   (c) 4442, 4450, 4458, 4466, 4482, 4490.

4. (a) 3227, 3224, 3221, 3218, 3215, 3212, 3209.
   (b) 8880, 8876, 8872, 8868, 8864, 8860, 8856.
   (c) 1555, 1548, 1541, 1534, 1527, 1520, 1513.

5. (a) 8890, 8892, 8894, 8896, 8898, 8900.
   (b) 5712, 5722, 5732, 5742, 5752, 5762.
   (c) 9400, 9300, 9200, 9100, 9000, 8900.
   (d) 8554, 7554, 6554, 5554, 4554, 3554.

Exercise 1.3

1. (a) $5\underline{4}87 \rightarrow 400$
   (b) $\underline{9}380 \rightarrow 9000$
   (c) $24\underline{0}8 \rightarrow 0$
   (d) $\underline{8}004 \rightarrow 8000$
   (e) $70\underline{9}2 \rightarrow 0$
   (f) $532\underline{7} \rightarrow 7$
   (g) $4\underline{2}78 \rightarrow 200$
   (h) $832\underline{9} \rightarrow 9$
   (i) $6\underline{6}64 \rightarrow 600$

2. (a) 7934 → Place value : 4, 30, 900, 7000
   (b) 9273 → Place value : 3, 70, 200, 9000
   (c) 6907 → Place value : 7, 0, 900, 6000
   (d) 8786 → Place value : 6, 80, 700, 8000

3. (a) 8976 → 6, 70, 900, 8000
   (b) 3705 → 5, 0, 700, 3000
   (c) 8900 → 0, 0, 900, 8000
   (d) 4742 → 2, 40, 700, 4000

4. (a) 5 at the tens place.
   2583 8456 7325

   In the given numbers, we observe that the tens digit in 2583 is 8, in 8456 is 5 and in 7325 is 2. Thus, 8456 is the required number.

Th	H	T	O
2	5	8	3
8	4	5	6
7	3	2	5

   (b) In the given numbers, we observe that the thousands digit in 4837 is 4, in 2587 is 2 and in 8496 is 8. Thus, 8496 is the required number.

Th	H	T	O
4	8	3	7
2	5	8	7
8	4	9	6

   (c) In the given numbers, we observe that ones digit in 4362 is 2, in 7641 is 1 and in 9326 is 6. Thus, 9326 is the required number.

Th	H	T	O
4	3	6	2
7	6	4	1
9	3	2	6

(d) In the given numbers, we observe that the hundreds digit in 9310 is 3, in 7945 is 9 and in 2490 is 4. Thus, 7945 is the required number.

Th	H	T	O
9	3	1	0
7	9	4	5
2	4	9	0

5. (a) In 5349, the coloured digit is 4.
The face value of 4 in 5349 is 4.

(b) In 7209, the coloured digit is 7.
The face value of 7 in 7209 is 7.

(c) In 6392, the coloured digit is 3.
The face value of 3 in 6392 is 3.

(d) In 8754, the coloured digit is 4.
The face value of 4 in 8754 is 4.

(e) In 4612, the coloured digit is 4.
The face value of 4 in 4612is 4.

(f) In 9213, the coloured digit is 3.
The face value of 3 in 9213 is 3.

Exercise 1.4

1. (a) 7945 = 7000 + 900 + 40 + 5

(b) 8273 = 8000 + 200 + 70 + 3

(c) 6434 = 6000 + 400 + 30 + 4

(d) 8189 = 8000 + 100 + 80 + 9

(e) 5024 = 5000 + 0 + 20 + 4

(f) 4308 = 4000 + 300 + 0 + 8

(g) 9270 = 9000 + 200 + 70 + 0

2. (a) 4000 + 900 + 70 + 5 = 4975

(b) 5000 + 40 + 8 = 5048

(c) 6000 + 400 + 90 + 2 = 6492

(d) 1000 + 200 + 9 = 1209

(e) 2000 + 300 + 60 + 7 = 2367

(f) 6000 + 500 + 30 + 2 = 6532

(g) 4000 + 80 + 5 = 4085

(h) 6000 + 900 + 40 + 6 = 6946

3. (a) 8 at the thousands place,
6 at the hundreds place,
4 at the tens place, and
0 at the ones place.

Th	H	T	O
8	6	4	0

(b) 6 at the thousands place,
3 at the hundreds place,
0 at the tens place, and
2 at the ones place.

Th	H	T	O
6	3	0	2

Exercise 1.5

1. (a) Predecessor of 8246 = 8246 – 1 = 8245

(b) Predecessor of 83264 = 83264 – 1 = 83263

(c) Predecessor of 9636 = 9636 – 1 = 9635

(d) Predecessor of 5000 = 5000 – 1 = 4999

(e) Predecessor of 9991 = 9991 – 1 = 9990

(f) Predecessor of 2999 = 2999 – 1 = 2998

(g) Predecessor of 8888 = 8888 – 1 = 8887

(h) Predecessor of 2796 = 2796 – 1 = 2795

2. (a) Successor of 7326 = 7326 + 1 = 7327

(b) Successor of 9326 = 9326 + 1 = 9327

(c) Successor of 1000 = 1000 + 1 = 1001

(d) Successor of 4593 = 4593 + 1 = 4594

(e) Successor of 5247 = 5247 + 1 = 5248

(f) Successor of 8734 = 8734 + 1 = 8735

(g) Successor of 8423 = 8423 + 1 = 8424

(h) Successor of 1499 = 1499 + 1 = 1500

3. (a) Predecessor of 7369 = 7369 – 1 = 7368
Successor of 7369 = 7369 + 1 = 7370

(b) Predecessor of 4225 = 4225 – 1 = 4224
Successor of 4225 = 4225 + 1 = 4226

(c) Predecessor of 6431 = 6431 – 1 = 6432
Successor of 6431 = 6431 + 1 = 6432

(d) Predecessor of 1111 = 1111 – 1 = 1110
Successor of 1111 = 1111 + 1 = 1112

(e) Predecessor of 3900 = 3900 – 1 = 3899
Successor of 3900 = 3900 + 1 = 3901

(f) Predecessor of 8347 = 8347 – 1 = 8346
Successor of 8347 = 8347 + 1 = 8348

(g) Predecessor of 5794 = 5794 – 1 = 5793
Successor of 5794 = 5794 + 1 = 5795

(h) Predecessor of 2323 = 2323 – 1 = 2322
Successor of 2323 = 2323 + 1 = 2324

Exercise 1.6

1. (a) 4385 > 2596 (b) 8736 > 8492
   (c) 937 < 4820 (d) 5436 < 5487
   (e) 5873 > 4896 (f) 8964 < 8968
   (g) 1243 > 502 (h) 8036 > 4027
   (i) 9325 < 9326

2.

S.No.	Largest number	Smallest number
(a)	1248	126
(b)	3515	978
(c)	9436	4303
(d)	2486	1454
(e)	9999	5545
(f)	8411	4327

3. (a) 247, 5364, 8493, 8734
   (b) 730,4850, 5236, 9248
   (c) 3496, 4369, 6524, 7369
   (d) 4827, 5736, 7536, 8472
   (e) 3047, 5326, 7028, 7034
4. (a) 9624, 7206, 5364, 832
   (b) 8340, 7364, 5249, 542
   (c) 3254, 2345, 1134, 1020
   (d) 5311, 4324, 4305, 4302
   (e) 9569, 5496, 2948, 2845

Exercise 1.7

1.

S.No.	Digits	Greatest No.	Smallest No.
(a)	5, 4, 9, 3	9543	3459
(b)	7, 3, 0, 8	8730	3078
(c)	4, 6, 1, 9	9641	1469
(d)	8, 2, 4, 5	8542	2458
(e)	1, 0, 8, 2	8210	1028

2. (a) 999 is the greatest 3-digit number.
   (b) 1000 is the smallest 4-digit number.
   (c) 9999 is the greatest 4-digit number.
   (d) 1023 is the smallest 4-digit number using different digits.
   (e) 9876 is the greatest 4-digit number using different digits.

3.

S.No.	Number	1 more than	1 less than	10 more than	10 less than
(a)	4696	4696 + 1 = 4697	4696 – 1 = 4695	4696 + 10 = 4706	4696 – 10 = 4686
(b)	7936	7936 + 1 = 7937	7936 – 1 = 7935	7936 + 10 = 7946	7936 – 10 = 7926
(c)	8273	8273 + 1 = 8274	8273 – 1 = 8272	8273 + 10 = 8283	8273 – 10 = 8263
S.No.	**Number**	**100 more than**	**100 less than**	**1000 more than**	**1000 less than**
(d)	5439	5439 + 100 = 5539	5439 – 100 = 5339	5439 + 1000 = 6439	5439 – 1000 = 4439
(e)	2073	2073 + 100 = 2173	2073 – 100 = 1973	2073 + 1000 = 3073	2073 – 1000 = 1073
(f)	8241	8241 + 100 = 8341	8241 – 100 = 8141	8241 + 1000 = 9241	8241 – 1000 = 7241
(g)	6355	6355 + 100 = 6455	6355 – 100 = 6255	6355 + 1000 = 7355	6355 – 1000 = 5355

Exercise 1.8

1. (a) 73: 70 and 80 (b) 88 : 80 and 90
   (c) 26 : 20 and 30 (d) 25 : 20 and 30
   (e) 81 : 80 and 90 (f) 98 : 90 and 100

2.

S.No.	Number	Ones digit	Comparison	Rounded number
(a)	26	6	6 > 5	30
(b)	65	5	5 = 5	70
(c)	274	4	4 < 5	270
(d)	345	5	5 = 5	350
(e)	2761	1	1 < 5	2760
(f)	4596	6	6 > 5	4600
(g)	8249	9	9 > 5	8250
(h)	3297	7	7 > 5	3300
(i)	5342	2	2 < 5	5340
(j)	5438	8	8 > 5	5440
(k)	2497	7	7 > 5	2300
(l)	5355	5	5 = 5	5360

3. (a) 60 : 53 (55) 68 65 69 70 (56) (63)

(b) 50 : (51) 55 (52) (54) 40 (53) (48) (49)

(c) 230 : (228) 238 245 (232) 331 (227) 222

(d) 1490 : 1495 (1485) 1497 (1493) (1488) 1484 1496

(e) 4570 : 4576 (4572) (4565) 4564 (4568) (4573) 4581

Exercise 1.9

1.

Roman Numerals	Hindu-Arabic Numerals	Roman Numerals	Hindu-Arabic Numerals	Roman Numerals	Hindu-Arabic Numerals
I	1	XI	11	XXI	21
II	2	XII	12	XXII	22
III	3	XIII	13	XXIII	23
IV	4	XIV	14	XXIV	24
V	5	XV	15	XXV	25
VI	6	XVI	16	XXVI	26
VII	7	XVII	17	XXVII	27
VIII	8	XVIII	18	XXVIII	28
IX	9	XIX	19	XXIX	29
X	10	XX	20	XXX	30

2. (a) In a class, there are XXII (22) boys and XVII (17) girls. The total number of students is XXXIX.

(b) Shubham had XXXV (₹ 35). He bought a pen for XXIV (₹ 24) and a pencil for V (₹ 5). The money left with Shubham is VI.

(c) Swati had XXII (22) ribbons. She lost XVI (16) of them. She has only VI ribbons now.

3. (a) XIII < XIV (b) XXIV < XVIII

(c) XXXIV < XXXVI (d) XIX > XVII

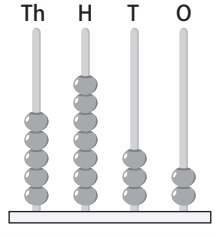
(e) XXIX < XXXII (f) XVII < XXIV

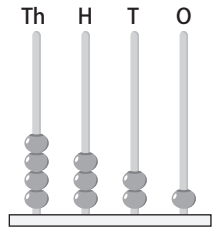
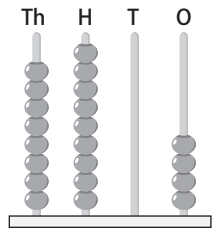
(g) XXXVI > XXXII (h) XVIII > XIV

(i) XXIII < XXIV

Revision Exercise

1.

S.No.	Number	Thousands (Th) (1000)	Hundreds (H) (100)	Tens (T) (10)	Ones (O) (1)	Representation on abacus
(a)	5732	5	7	3	2	

(b)	4321	4	3	2	1	
(c)	8904	8	9	0	4	

2. (a) 9999, Nine thousand nine hundred ninety-nine
   (b) 2740, Two thousand seven hundred forty
   (c) 1805 One thousand eight hundred five
   (d) 2438 Two thousand four hundred thirty-eight
3. (a) 7004, 7005, 7006, 7007, 7008, 7009, 7010, 7011, 7012, 7013, 7014
   (b) 4272, 4273, 4274, 4275, 4276, 4277, 4278, 4279, 4280, 4281, 4282
   (c) 8224, 8225, 8226, 8227, 8228, 8229, 8230, 8231, 8232, 8233, 8234
   (d) 6711, 6712, 6713, 6714, 6715, 6716, 6717, 6718, 6719, 6720, 6721
   (e) 5995, 5996, 5997, 5998, 5999, 6000, 6001, 6002, 6003, 6004, 6005
4.

S.No.	Number	Place value	Face value	Sum of place value and face value
(a)	4268	200	2	202
(b)	8492	90	9	99
(c)	5927	900	9	909
(d)	4038	0	0	0
(e)	1758	8	8	8

5. (a) 8364 = 8000 + 300 + 60 + 4
   (b) 6209 = 6000 + 200 + 9
   (c) 5492 = 5000 + 400 + 90 + 2
   (d) 7376 = 7000 + 300 + 20 + 6
6. (a) Even numbers : 7062, 7064, 7066, 7068, 7070, 7072, 7074, 7076, 7078, 7080
   Odd numbers : 7061, 7063, 7065, 7067, 7069, 7071, 7073, 7075, 7077, 7079
   (b) Even numbers : 9886, 9888, 9890, 9892, 9894, 9896, 9898, 9900, 9902, 9904
   Odd numbers : 9887, 9889, 9891, 9893, 9895, 9897, 9899, 9901, 9903, 9905
7.

S.No.	Number	Predecessor	Successor
(a)	6273	6273 – 1 = 6272	6273 + 1 = 6274
(b)	4999	4999 – 1 = 4998	4999 + 1 = 5000
(c)	8275	8275 – 1 = 8274	8275 + 1 = 8276
(d)	4931	4931 – 1 = 4932	4931 + 1 = 4932

8. (a) 5327 > 4126 (b) 7968 > 7954
   (c) 8124 < 8956 (d) 3641 > 3621
   (e) 5007 > 5002 (f) 4361 > 934
9. Ascending order : 2736, 2745, 8456, 9318, 9324
   Descending order : 9324, 9318, 8456, 2745, 2736

10. (a) Smallest number : 2479, Greatest number : 9742

(b) Smallest number : 3089, Greatest number : 9830

11. (a) Given number = 84
Ones digit 4 < 5
So, rounded-off number = 80

(b) Given number = 128
Ones digit 8 > 5
So, rounded-off number = 130

(c) Given number = 245
Ones digit 5 > 1
So, rounded-off number = 250

(d) Given number = 4999
Ones digit 9 > 5
So, rounded-off number = 5000

HOTS

1. Greatest 4-digit number why different digits = 9826

Smallest 4-digit number why different digits = 1023

2. Hundreds digit = 9

Ones digit = 9 – 5 = 4

Tens digit = 4 + 5 = 9

Thousands digit = 9 – 1 = 8

Thus, the required number = 8994

Th	H	T	O
8	9	9	4

3. Given digits are 9, 7, 5 and 0

Six 4-digit numbers using these digits are 9750, 9570, 9705, 9507, 7950 and 7590

Note : Numbers may very.

Case-based Questions

1. The number of flags made by Group A = 52 = LII

Thus, (b) is the correct answer.

2. LXIV = 64 = Number of flags made by Group C.

Thus, (b) is the correct answer.

3. The number of flags made by Group B = 68 = LXVIII

Thus, (d) is the correct answer.

4. The number of flags made by Group D = 75 = LXXV

Thus, (b) is the correct answer.

5. The number of flags made by Group E

The number of flags made by Group B + 1 = 68 + 1 = 69 = LXIX

Thus, (d) is the correct answer.

Mental Maths

A. 1. 9998 is the predecessor of the greatest 4-digit number.

2. 1000 is the successor of the greatest 3-digit number.

3. The place value of 0 is always 0.

4. The smallest 4-digit number formed by using the digits 2, 5, 0 and 7 is 2057.

5. The greatest 4-digit even number is 9998.

6. The smallest 4-digit odd number is 1001.

7. The place value of 9 in 9305 is 9000.

8. The short form of 8000 + 300 + 9 is 8309.

B. 1. The largest 4 digit number having 5 in hundreds place = 9587
Thus, (c) is the correct answer.

2. Four thousand three hundred nine = 4309
Thus, (b) is the correct answer.

3. The number that comes just after = 4089 + 1 = 4090
Thus, (d) is the correct answer.

4. 4521 : 4000 + 500 + 20 + 1
Thus, (b) is the correct answer.

5. The number obtained by reversing the digits of 9087 = 7809.
Thus, (a) is the correct answer.

Chapter 2. Addition

Recap

1. The amount deposited by Neha = ₹ 72 + ₹ 8 = ₹ 80

2. The amount deposited by Nivedita = ₹ 60 + ₹ 15 = ₹ 75

3. The amount deposited by Suman and Nivedita = ₹ 72 + ₹ 15 = ₹ 87

4. The amount deposited by Raj and Neha = ₹ 60 + ₹ 80 = ₹ 140

5. The amount deposited by all the children
= ₹ 80 + ₹ 75 + ₹ 60
= ₹ 287.

Exercise 2.1

1. (a) 18 + 0 = 18 (b) 27 + 1 = 28
(c) 24 + 0 = 24 (d) 35 + 1 = 36
(e) 15 + 1 = 16 (f) 241 + 0 = 241
(g) 99 + 1 = 100 (h) 0 + 240 = 240
(i) 17 + 1 = 18
(j) (110 + 18) + 16 = 110 + (18 + 16)
(k) 17 + 10 + 15 = 15 + 10 + 17
(l) 123 + 312 + 55 = 312 + 123 + 55
2. (a) 7 → 0 + 7, 1 + 6, 2 + 5, 3 + 4, 4 + 3
(b) 8 → 0 + 8, 1 + 7, 2 + 6, 3 + 5, 5 + 3
(c) 12 → 0 + 12, 1 + 11, 2 + 10, 3 + 9, 4 + 8

Exercise 2.2

1. (a) 27 + 13 = 20 + 7 + 10 + 3 = 20 + 10 + 7 + 3
= 30 + 10 = 40
(b) 16 + 32 = 10 + 6 + 30 + 2 = 10 + 30 + 6 + 2
= 40 + 8 = 48
(c) 24 + 29 = 20 + 4 + 20 + 9 = 20 + 20 + 4 + 9
= 40 + 13 = 53
(d) 58 + 35 = 50 + 8 + 30 + 5 = 50 + 30 + 8 + 5
= 80 + 13 = 93
(e) 20 + 68 = 20 + 0 + 60 + 8 = 20 + 60 + 0 + 8
= 80 + 8 = 88
(f) 30 + 32 = 30 + 0 + 30 + 2 = 30 + 30 + 0 + 2
= 60 + 2 = 62
(g) 24 + 16 = 20 + 4 + 10 + 6 = 20 + 10 + 4 + 6
= 30 + 10 = 40
(h) 11 + 45 = 10 + 1 + 40 + 5 = 10 + 40 + 1 + 5
= 50 + 6 = 56
2. (a) 16 + 13 = 16 + 10 + 3 = 26 + 3 = 29
(b) 24 + 32 = 24 + 30 + 2 = 54 + 2 = 56
(c) 30 + 16 = 30 + 10 + 6 = 40 + 6 = 46
(d) 45 + 20 = 45 + 10 + 10 = 55 + 10 = 65
(e) 13 + 32 = 13 + 30 + 2 = 43 + 2 = 45
(f) 24 + 18 = 24 + 10 + 8 = 34 + 8 = 42
(g) 12 + 56 = 12 + 50 + 6 = 62 + 6 = 68
(h) 27 + 34 = 27 + 30 + 4 = 57 + 4 = 61
3. (a) 35 + 78
= 35 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 8
= 45 + 10 + 10 + 10 + 10 + 10 + 10 + 8
= 55 + 10 + 10 + 10 + 10 + 10 + 8
= 65 + 10 + 10 + 10 + 10 + 8
= 75 + 10 + 10 + 10 + 8
= 85 + 10 + 10 + 8
= 95 + 10 + 8
= 105 + 8
= 113
(b) 48 + 22
= 48 + 10 + 10 + 2
= 58 + 10 + 2
= 68 + 2 = 70
(c) 68 + 32
= 68 + 10 + 10 + 10 + 2
= 78 + 10 + 10 + 2
= 88 + 10 + 2
= 98 + 2 = 100
(d) 72 + 14 = 72 + 10 + 4 = 82 + 4 = 86
(e) 54 + 38
= 54 + 10 + 10 + 10 + 8
= 64 + 10 + 10 + 8
= 74 + 10 + 8
= 84 + 8 = 92
(f) 30+ 60 = 30 + 10 + 10 + 10 + 10 + 10 + 10
= 40 + 10 + 10 + 10 + 10 + 10
= 50 + 10 + 10 + 10 + 10
= 60 + 10 + 10 + 10
= 70 + 10 + 10
= 80 + 10 = 90
(g) 28 + 12 = 28 + 10 + 2 = 38 + 2 = 40
(h) 22 + 42
= 22 + 10 + 10 + 10 + 10 + 2
= 32 + 10 + 10 + 10 + 2
= 42 + 10 + 10 + 2
= 52 + 10 + 2
= 62 + 2 = 64
4. Take or draw a 10 × 10 number chart, i.e., the hundreds chart. Write numbers 1 to 100.
We use the above chart to find the following sums.
(a) 13 + 62 = 75 (b) 26 + 35 = 61
(c) 24 + 28 = 52 (d) 32 + 42 = 74
(e) 19 + 33 = 52 (f) 37 + 15 = 52
(g) 26 + 29 = 55 (h) 45 + 17 = 62

Exercise 2.3

1. (a)

	H	T	O
	2	4	3
+	1	2	3
	3	6	6

(b)

	H	T	O
	5	3	2
+	1	2	3
	6	5	5

(c)

	H	T	O
	6	4	0
+	1	1	8
	7	5	8

(d)

	H	T	O
	3	9	7
+	3	0	1
	6	9	8

(e)

	H	T	O
	4	3	2
+	3	2	4
	7	5	6

(f)

	H	T	O
	1	4	5
+	5	4	1
	6	8	6

(g)

	H	T	O
	4	3	2
+	3	2	7
	7	5	9

(h)

	H	T	O
	2	1	3
+	3	1	3
	5	2	6

2. (a)

	H	T	O
	3	2	5
+	2	4	3
	1	3	0
	6	9	8

(b)

	H	T	O
	6	3	2
+	2	3	4
	1	2	2
	9	8	8

(c)

	H	T	O
	3	0	5
+	1	3	0
	2	4	3
	6	7	8

(d)

	H	T	O
	3	2	3
+	2	4	3
	1	3	3
	6	9	9

3. (a)

	H	T	O
	1	4	4
+	2	3	3
	3	7	7

(b)

	H	T	O
	2	4	0
+	3	4	5
	5	8	5

(c)

	H	T	O
	4	3	7
+	1	4	2
	5	7	9

(d)

	H	T	O
	5	3	2
+	2	4	3
	7	7	5

(e)

	H	T	O
	3	0	4
+	4	2	0
	7	2	4

(f)

	H	T	O
	6	3	5
+	1	2	3
	7	5	8

(g)

	H	T	O
	8	1	4
+	1	2	4
	9	3	8

(h)

	H	T	O
	1	4	5
+	5	3	2
	6	7	7

(i)

	H	T	O
	2	4	3
	3	1	4
+	1	2	2
	6	7	9

(j)

	H	T	O
	6	1	2
+	1	4	3
	1	3	2
	8	8	7

Exercise 2.4

1. (a)

	Th	H	T	O
	1	4	3	2
+	2	5	2	3
	3	9	5	5

(b)

	Th	H	T	O
	2	7	3	8
+	4	1	5	1
	6	8	8	9

(c)

	Th	H	T	O
	1	6	9	2
+	4	2	0	4
	5	8	9	6

(d)

	Th	H	T	O
	2	7	3	2
+	4	2	3	5
	6	9	6	7

(e)

	Th	H	T	O
	2	2	2	2
+	3	4	2	3
	5	6	4	5

(f)

	Th	H	T	O
	1	5	3	5
+	4	2	2	2
	5	7	5	7

(g)

	Th	H	T	O
	5	3	4	2
+	1	2	0	3
	6	5	4	5

(h)

	Th	H	T	O
	2	4	6	1
+	6	2	1	5
	8	6	7	6

2. (a)

	Th	H	T	O
	3	4	0	2
+	2	1	1	4
	1	3	3	2
	6	8	4	8

(b)

	Th	H	T	O
	4	3	2	3
+	3	5	0	1
	1	1	3	2
	8	9	5	6

(c)

	Th	H	T	O
	2	1	3	1
+	6	5	1	0
	1	1	4	8
	9	7	8	9

(d)

	Th	H	T	O
	1	2	3	5
+	4	0	2	1
	2	1	0	3
	7	3	5	9

3. (a)

	Th	H	T	O
	1	5	2	4
+		2	0	3
	1	7	2	7

(b)

	Th	H	T	O
	1	6	4	2
+	2	3	2	7
	3	9	6	9

(c)

	Th	H	T	O
	5	0	0	3
+	3	4	5	1
	8	4	5	4

(d)

	Th	H	T	O
	6	0	1	2
+	1	2	0	3
	7	2	1	5

(e)

	Th	H	T	O
	5	6	1	0
+	4	1	4	8
	9	7	5	8

(f)

	Th	H	T	O
	3	4	2	1
+	1	4	0	4
	5	0	7	6
	9	9	0	1

(g)

	Th	H	T	O
	4	0	2	1
+	1	2	3	5
	1	1	2	0
	6	3	7	6

(h)

	Th	H	T	O
	2	7	3	4
+	4	0	5	2
	1	2	3	1
	8	0	1	7

(i)

	Th	H	T	O
	1	3	2	9
+	2	3	4	0
	4	1	2	0
	7	7	8	9

Exercise 2.5

1. (a)

	H	T	O
	2	4	8
+		3	9
	2	8	7

(b)

	H	T	O
	5	6	4
+	2	1	7
	7	8	1

(c)

	H	T	O
	3	2	6
+	2	4	9
	5	7	5

(d)

	H	T	O
	4	0	1
+	2	5	9
	6	6	0

(e)

	Th	H	T	O
		4	9	2
+		6	3	8
	1	1	3	0

(f)

	Th	H	T	O
		5	8	3
+		6	4	7
	1	2	3	0

(g)

	Th	H	T	O
		9	7	2
+		3	9	9
	1	3	7	1

(h)

	Th	H	T	O
		7	5	8
+		3	8	4
	1	1	4	2

2. (a)

	H	T	O
	4	3	2
+	1	4	9
	2	8	3
	8	6	4

(b)

	Th	H	T	O
		5	9	4
+		1	7	3
		2	7	9
	1	0	4	6

(c)

	H	T	O
	3	9	3
+	2	4	5
	1	4	0
	7	7	8

(d)

	Th	H	T	O
		2	8	9
+		3	9	6
		3	7	7
	1	0	6	2

3. (a)

	H	T	O
	4	2	1
+	2	2	9
	6	5	0

(b)

	H	T	O
	4	4	0
+	2	7	9
	8	1	9

(c)

	H	T	O
	5	3	7
+	2	8	4
	8	2	1

(d)

	H	T	O
	3	4	9
+	2	8	4
	6	3	3

(e)

	H	T	O
	3	4	7
+	1	2	6
	4	7	3

(f)

	H	T	O
	4	6	1
+	2	5	3
	7	1	4

(g)

	H	T	O
	1	5	7
+	3	8	9
	5	4	6

(h)

	H	T	O
	3	6	2
+	1	7	7
	5	3	9

(i)

	H	T	O
	4	3	5
+	2	1	8
	2	7	5
	9	2	8

(j)

	H	T	O
	4	2	8
+	2	3	9
	2	6	4
	9	3	1

(k)

	H	T	O
	5	3	7
+	1	8	3
	2	7	4
	9	9	4

(l)

	H	T	O
	4	2	6
+	3	8	7
	1	7	5
	9	8	8

Exercise 2.6

1. (a)

	Th	H	T	O
	3	2	4	3
+	3	1	8	9
	6	4	3	2

(b)

	Th	H	T	O
	7	4	8	2
+	2	3	5	8
	9	8	4	0

(c)

	Th	H	T	O
	4	5	7	4
+	3	8	6	7
	8	4	4	1

(d)

	Th	H	T	O
	2	7	5	6
+	3	5	0	8
	6	2	6	4

(e)

	Th	H	T	O
	3	4	6	3
+	2	8	7	7
	3	2	6	9
	9	6	0	9

(f)

	Th	H	T	O
	3	9	7	2
+	4	0	3	4
	1	8	6	8
	9	8	7	4

(g)

	Th	H	T	O
	2	4	8	6
+	2	8	6	9
	5	3	5	5

(h)

	Th	H	T	O
	3	4	8	7
+	2	7	3	6
	6	2	2	3

2. (a)

	Th	H	T	O
	2	4	5	3
+	3	7	9	8
	6	2	5	1

(b)

	Th	H	T	O
	5	2	3	4
+	1	8	6	9
	7	1	0	3

(c)

	Th	H	T	O
	2	1	0	3
+	1	0	3	8
	6	8	4	5
	9	9	8	6

(d)

	Th	H	T	O
	5	3	2	4
+	1	7	8	6
	7	1	1	0

(e)

	Th	H	T	O
	4	1	8	9
+	1	9	8	4
	6	1	7	3

(f)

	Th	H	T	O
	4	5	3	6
	1	7	3	6
+	2	4	5	9
	8	7	3	1

(g)

	Th	H	T	O
	3	2	1	4
+	2	7	8	3
	5	9	9	7

(h)

	Th	H	T	O
	4	2	3	5
+	1	8	6	4
	6	0	9	9

(i)

	Th	H	T	O
	1	4	5	3
+	2	8	9	6
	3	4	7	6
	7	8	2	5

Mental Maths

1. 546 + 10 = 556
2. 634 + 100 = 734
3. 4561 + 1000 = 5561
4. 5649 + 10 = 5659
5. 8467 + 100 = 8567
6. 3454 + 1000 = 4454
7. 436 + 10 = 446
8. 5734 + 10 = 5744
9. 2410 + 100 = 2510
10. 496 + 100 = 596
11. 7108 + 1000 = 8108
12. 8276 + 1000 = 9276

Exercise 2.7

(a)

	Actual Sum			Estimated Sum		
		4	2		4	0
+		6	4		6	0
	1	0	6	1	0	0

(b)

	Actual Sum			Estimated Sum		
		5	5		6	0
+		9	3		9	0
	1	4	8	1	5	0

(c)

	Actual Sum			Estimated Sum		
	2	4	6	2	5	0
+	3	7	8	3	8	0
	6	2	4	6	3	0

(d)

	Actual Sum			Estimated Sum		
	4	3	9	4	4	0
+	2	7	3	2	7	0
	7	1	2	7	1	0

(e)

	Actual Sum				Estimated Sum			
	4	3	6	7	4	3	7	0
+	3	2	5	1	3	2	5	0
	7	6	1	8	7	6	2	0

(f)

	Actual Sum				Estimated Sum			
	3	4	9	5	3	5	0	0
+	2	3	6	8	2	3	7	0
	5	8	6	3	5	8	7	0

Exercise 2.8

1. (a) Number of girls = 655
   Number of boys = + 948
   Number of students = 1603
   Thus, there are 1603 students in the school.

   (b) Number of visitors on Sunday = 4248
   Number of visitors on Monday = 2750
   Number of visitors on Tuesday = + 1888
   Total number of visitors = 8886

(c) The cost of blue tooth = ₹ 2 7 5 0
The cost of mobile = ₹ 3 4 0 0
+
The cost of tablet = ₹ 1 6 7 5
Total cost = ₹ 7 8 2 5

(d) Number of flowers plucked from a garden = 2 4 5
Number of flowers plucked from other garden = + 3 5 5
Number of flowers plucked in all = 6 0 0

(e) Number of men = 2 7 5 4
Number of women = 2 4 5 0
+
Number of children = 3 7 4 5
Total population = 8 9 4 9

(f) Distance travelled by bus = 4 7 5 km
Distance travelled by train = 1 2 4 0 km
+
Distance travelled by car = 5 4 5 km
Total distance travelled = 2 2 6 0 km

(g) Number of Chocolate ice creams = 2 5 0
Number of Vanilla ice creams = 3 8 5
+
Number of other ice creams = 7 8 4
Total number of ice creams = 1 4 1 9

(h) Number of packets of milk sold on Monday = 7 9 5
Number of packets of milk sold on Tuesday = + 1 4 2 5
Total number of packets of milk sold in these two days = 2 2 2 0

(i) Number of passengers in train = 958
Number of passengers board in train = + 145
Total number of passengers in train = 1103

2. Do it yourself.

Revision Exercise

1. (a)

	H	T	O
	3	3	2
+		4	4
	3	7	6

(b)

	H	T	O
	5	9	8
+	1	4	2
	7	4	0

(c)

	H	T	O
	7	2	0
+	2	3	4
	9	5	4

(d)

	H	T	O
	5	3	9
+	1	7	4
	7	1	3

(e)

	H	T	O
	2	4	5
	3	2	1
+	1	1	2
	6	7	8

(f)

	H	T	O
	3	2	4
	1	2	3
+	4	3	2
	8	7	9

(g)

	Th	H	T	O
		3	2	4
		3	8	3
+		4	3	9
	1	1	4	6

(h)

	H	T	O
	1	4	1
	2	3	2
+	4	4	8
	8	2	1

2. (a)

	Th	H	T	O
	5	2	4	3
+	3	7	3	2
	8	9	7	5

(b)

	Th	H	T	O
	4	2	7	3
+	1	4	3	2
	5	7	0	5

(c)

	Th	H	T	O
	6	9	7	5
+	1	2	8	5
	8	2	6	0

(d)

	Th	H	T	O
	2	7	6	9
+	1	3	7	8
	4	1	4	7

(e)

	Th	H	T	O
	2	4	3	3
	1	3	5	3
+	1	0	0	3
	4	7	8	9

(f)

	Th	H	T	O
	3	2	3	2
+	2	4	3	6
	2	3	2	3
	7	9	9	1

(g)

	Th	H	T	O
	1	6	4	2
+	3	3	8	4
	2	6	9	9
	7	7	2	5

(h)

	Th	H	T	O
	2	1	4	3
+	1	2	9	8
	3	3	2	3
	6	7	6	4

3. (a)

	H	T	O
	3	7	3
+	6	2	1
	9	9	4

(b)

	H	T	O
	2	4	8
+	1	2	2
	3	7	0

(c)

	Th	H	T	O
		4	6	5
+		7	3	4
	1	1	9	9

(d)

	Th	H	T	O
		2	7	1
+			7	5
	6	5	7	3
	6	9	1	9

(e)

	Th	H	T	O
	8	4	3	4
+	1	3	3	0
	9	7	6	4

(f)

	Th	H	T	O
	4	1	0	6
+	2	6	1	5
	6	7	2	1

(g)

	Th	H	T	O
	4	2	0	5
+	3	2	2	5
	7	4	3	0

(h)

	Th	H	T	O
	3	4	2	0
+	5	5	1	4
	8	9	3	4

(i)

	Th	H	T	O
	1	7	3	6
+	4	2	5	2
	5	9	8	8

(j)

	Th	H	T	O
		1	9	2
		2	2	2
+	3	3	3	3
	3	7	4	7

(k)

	H	T	O
		4	6
	2	4	5
+	6	4	5
	9	3	6

(l)

	Th	H	T	O
	3	7	3	6
		4	6	8
+		3	4	9
	4	5	5	3

4. (a) The length of red ribbon = 1 2 7 5 cm
The length of green ribbon = + 1 4 5 0 cm
Total length of both ribbons = 2 7 2 5 cm

(b) Number of runs scored by Sachin Tendulkar = 125

Number of runs scored by Rahul Dravid = 125 + 63 = 188

Number of runs scored by Virendra Sehwag = 188 + 53 = 241

(c) (i) Number of Pepsi cartons = 9 5 8
Number of Mirinda cartons = + 1 4 7 5
Total number of cartons = 2 4 3 3

(ii) Number of Limca cartons = 2 4 4 5
Number of Thums-Up cartons = + 1 2 2 0
Total number of cartons = 3 6 6 5

(iii) Number of Coca Cola cartons = 1 8 4 5
Number of Pepsi cartons = + 9 5 8
Total number of cartons = 2 8 0 3

(iv) Number of Pepsi cartons = 958
Number of Thums-Up cartons = + 1220
Total number of cartons = 2178

(v) Number of Mirinda cartons = 1 4 7 5
Number of Limca cartons = + 2 4 4 5
Total number of cartons = 3 9 2 0

(vi) Number of CocaCola cartons = 1 8 4 5
Number of Limca cartons = + 2 4 4 5
Total number of cartons = 4 2 9 0

5. Do it yourself.

HOTS

1. (a)

	Th	H	T	O
	5	7	2	4
+	D	6	9	A
	1	C	B	1
	9	1	5	3

Here,

4 + A + 1 = 13 or 5 + A = 13 or A = 8

2 + 9 + B + 1 (carried) = 15 or 12 + B = 15 or B = 3

7 + 6 + C + 1 (carried) = 21 or 14 + C = 21 or C = 7

5 + D + 1 + 2 (carried) = 9 or 8 + D = 9 or D = 1

Thus, A = 8, B = 3, C = 7 and D = 1.

(b)

	Th	H	T	O
	4	8	9	7
	3	C	5	6
+	D	4	B	5
	9	7	8	A

Here,

7 + 6 + 5 = A or A = 18 or A = 8

9 + 5 + B + 1 (carried) = 18 or 15 + B = 18 or B = 3

8 + C + 4 + 1 (carried) = 17 or 13 + C = 17 or C = 4

4 + 3 + D + 1 (carried) = 9 or 8 + D = 9 or D = 1

Thus, A = 8, B = 3, C = 4 and D = 1.

(c)

	Th	H	T	O
	1	7	A	9
	2	B	9	6
+	4	8	5	3
	D	3	8	C

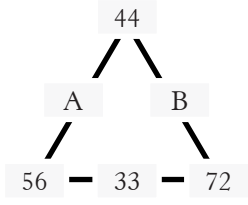
Here,

9 + 6 + 3 = C or C = 18 or C = 8

A + 9 + 5 + 1 (carried) = 18 or A + 15 = 18 or A = 3

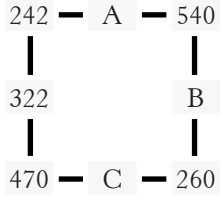
7 + B + 8 + 1 (carried) = 23 or B + 16 = 23
or B = 7
1 + 2 + 4 + 2 (carried) = D or D = 9
Thus, A = 3, B = 7, C = 8 and D = 9.

2. (a)



Here, 56 + 33 + 72 = 161
So, 44 + B + 72 = 161
or B + 116 = 161 or B = 161 – 116 or B = 45
and 44 + A + 56 = 161 or A + 100 = 161 or A = 61
Thus, A = 61 and B = 45.

(b)



Here, 242 + 322 + 470 = 1034
So, 242 + A + 540 = 1034 or A + 782 = 1034
or A = 1034 – 782 = 252 and 540 + B + 260 = 1034
or B + 800 = 1034 or B = 1034 – 800 = 234
Also, 470 + C + 260 = 1034 or C + 730 = 1034
or C = 1034 – 730 = 304
Thus, A = 252, B = 234 and C = 304.

Case-based Questions

1. The length of river Nile = 6650 km
The length of river Godavari = 1465 km
Sum = 8115 km
Thus, (a) is the correct answer.
2. The length of river Ganga = 2525 km
The length of river Amazon = 6992 km
Sum = 9517 km
Thus, (c) is the correct answer.
3. The length of river Narmada = 1312 km
The length of river Niger = 4184 km
The length of river Mekong = 4350 km
Sum = 9846 km
Thus, (b) is the correct answer.
4. The length of the longest river Amazon = 6992 km
The length of the smallest river Narmada = 1312 km
Sum = 6992 km + 1312 km = 8304 km
Thus, (d) is the correct answer.
5.

The length of river Nile	=		6650 km
The length of river Ganga	=		2525 km
The length of river Amazon	=		6992 km
The length of river Narmada	=		1312 km
The length of river Volga	=		3530 km
The length of river Niger	=		4184 km
The length of river Mekong	=		4350 km
The length of river Godavari	=	+	1465 km
Sum	=		31008 km

Thus, (d) is the correct answer.

Mental Maths

A. 1. 5641 + 0 = 5641
2. 7364 + 1 = 7365
3. 4364 + 2364 = 2364 + 4364
4. 100 = 9 tens + 10 ones
5. 300 = 2 hundreds + 10 tens
6. 3458 + 100 = 3558
7. 2764 + 100 = 2864
8. 4060 + 10 = 4070
9. 5736 + 1000 = 6736
10. 5364 + 3000 = 8364

B. 1. Let us add two odd numbers
1 + 1 = 2, 1 + 3 = 4, 5 + 9 = 14, 13 + 7 = 20, etc. The sum of any two odd numbers an even number.
Thus, the given statement is true.
2. Let us add two even numbers
2 + 2 = 4, 6 + 4 = 10, 8 + 6 = 14, 2 + 12 = 14, etc. The sum of any two even numbers is an even number.
Thus, the given statement is true.
3. Let us add three odd numbers
1 + 3 + 5 = 9
3 + 5 + 7 = 15
7 + 3 + 1 = 11, etc.
The sum of any three odd numbers is an odd number.
Thus, the given statement is false.

4. Let us add an even number and an odd number.
   2 + 5 = 7,
   4 + 9 = 13,
   11 + 10 = 21, etc.
   The sum of an even number and an odd number is an odd number.
   Thus, the given statement is false.

5. Let us add three even numbers.
   2 + 4 + 6 = 12,
   8 + 10 + 12 = 30
   16 + 14 + 30 = 60, etc.
   The sum of three even numbers is an even number.
   Thus, the given statement is true.

6. Let compare the sum add ends given below.
   (a) 4 + 9 = 13 (b) 12 + 8 = 20
   (c) 24 + 6 = 30 (d) 5 + 5 = 10
   The sum is always greater than the add ends.
   Thus, the given statement is true.

7. The largest 2-digit number = 99
   The other given number = + 1
   Sum = 100
   The number of digits in 100 is three.
   Thus, the given statement is true.

Chapter 3. Subtraction

Recap

1. Swati gets the highest marks.
2. 48 – 28 = 20
3. 42 – 36 = 6
4. 45 – 32 = 13
5. 50 – 41 = 9
6. 35 – 28 = 7
7. 48 – 32 = 16

Exercise 3.1

1. (a) 70 – 0 = $\underline{70}$ (b) 24 – 1 = $\underline{23}$
   (c) 27 – 27 = $\underline{0}$ (d) 42 – 0 = $\underline{42}$
   (e) 81 – 1 = $\underline{80}$ (f) 29 – 29 = $\underline{0}$
   (g) 26 – $\underline{0}$ = 26 (h) 44 – $\underline{1}$ = 43
   (i) 128 – $\underline{128}$ = 0 (j) 61 – $\underline{0}$ = 61
   (k) 53 – $\underline{1}$ = 52 (l) 28 – $\underline{28}$ = 0
   (m) $\underline{72}$ – 0 = 72 (n) $\underline{24}$ – 1 = 23
   (o) $\underline{93}$ – 93 = 0

2.

Addition facts	Subtraction facts
(a) 17 + 30 = 47	(i) 47 – 17 = 30 (ii) 47 – 30 = 17
(b) 24 + 35 = 59	(i) 59 – 24 = 35 (ii) 59 – 35 = 24
(c) 28 + 42 = 70	(i) 70 – 28 = 42 (ii) 70 – 42 = 28
(d) 92 + 27 = 119	(i) 119 – 92 = 27 (ii) 119 – 27 = 92
(e) 26 + 46 = 72	(i) 72 – 26 = 46 (ii) 72 – 46 = 26

3. (a) 73 – 12 = 61, 61 + 12 = 73
   (b) 92 – 88 = 4, 4 + 88 = 92
   (c) 33 – 17 = 16, 16 + 17 = 33
   (d) 42 – 15 = 27, 27 + 15 = 42

4. (a) $\underline{58}$ –13 = 45 (b) $\underline{40}$ – 10 = 30
   (c) 82 – $\underline{19}$ = 63 (d) $\underline{104}$ – 26 = 78
   (e) $\underline{60}$ – 15 = 45 (f) 72 – $\underline{17}$ = 55
   (g) $\underline{43}$ – 13 = 30 (h) 29 – $\underline{17}$ = 12
   (i) 99 – $\underline{91}$ = 8

Exercise 3.2

1. (a) 28 – 14 = 20 + 8 – 10 + 4 = 20 – 10 + 8 – 4
= 10 + 4 = 14

(b) 45 – 24 = 40 + 5 – 20 + 4 = 40 – 20 + 5 – 4
= 20 + 1 = 21

(c) 87 – 26 = 80 + 7 – 20 + 6 = 80 – 20 + 7 – 6
= 60 + 1 = 61

(d) 54 – 33 = 50 + 4 –30 + 3 = 50 – 30 + 4 – 3
= 20 + 1 = 21

(e) 68 – 42 = 60 + 8 – 40 + 2 = 60 – 40 + 8 – 2
= 20 + 6 = 26

(f) 69 – 16 = 60 + 9 – 10 + 6 = 60 –10 + 9 – 6
= 50 + 3 = 53

(g) 49 –31 = 40 + 9 –30 + 1 = 40 – 30 + 9 – 1
= 10 + 8 = 18

(h) 72 – 20 = 70 + 2 – 20 + 0 = 70 – 20 + 2 – 0
= 50 + 2 = 52

2. (a) 36 – 24 = 36 – (20 + 4) = 36 –20 – 4 = 16 – 4
= 12

(b) 39 – 18 = 39 – (10 + 8) = 39 – 10 – 8 = 29 – 8
= 21

(c) $44 - 23 = 44 - (20 + 3) = 44 - 20 - 3 = 24 - 3 = 21$

(d) $56 - 23 = 56 - (20 + 3) = 56 - 20 - 3 = 36 - 3 = 33$

(e) $86 - 26 = 86 - (20 + 6) = 86 - 20 - 6 = 66 - 6 = 60$

(f) $69 - 16 = 69 - (10 + 6) = 69 - 10 - 6 = 59 - 6 = 53$

(g) $72 - 11 = 72 - (10 + 1) = 72 - 10 - 1 = 62 - 1 = 61$

(h) $52 - 41 = 52 - (40 + 1) = 52 - 40 - 1 = 12 - 1 = 11$

3. (a) 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

$26 - 18 = 2 + 6 = 8$

(b) 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

$34 - 26 = 4 + 4 = 8$

(c) Moving on the number line, we observe that :

$23 \xrightarrow[7]{} 30 \xrightarrow[60]{} 90 \xrightarrow[5]{} 95$

So, $95 - 23 = 7 + 60 + 5 = 72$

(d) Moving on the number line, we observe that :

$42 \xrightarrow[8]{} 50 \xrightarrow[20]{} 70 \xrightarrow[8]{} 78$

So, $78 - 42 = 8 + 20 + 8 = 36$

(e) Moving on the number line, we observe that :

$22 \xrightarrow[8]{} 30 \xrightarrow[8]{} 38$

So, $38 - 22 = 8 + 8 = 16$

(f) Moving on the number line, we observe that :

$23 \xrightarrow[7]{} 30 \xrightarrow[10]{} 40 \xrightarrow[7]{} 47$

So, $47 - 23 = 7 + 10 + 7 = 24$

(g) Moving on the number line, we observe that :

$14 \xrightarrow[6]{} 20 \xrightarrow[8]{} 28$

So, $28 - 14 = 6 + 8 = 14$

(h) Moving on the number line, we observe that :

$34 \xrightarrow[6]{} 40 \xrightarrow[10]{} 50 \xrightarrow[6]{} 56$

So, $56 - 34 = 6 + 10 + 6 = 22$

4. (a) $37 - 17 = 37 - (10 + 7)$

Since, $37 - 10 = 27$
and $27 - 7 = 20$
So, $37 - 17 = 20$

(b) $87 - 54 = 87 - (50 + 4)$

Since, $87 - 50 = 37$ and $37 - 4 = 33$
So, $87 - 54 = 33$

(c) $88 - 24 = 88 - (20 + 4)$

Since, $88 - 20 = 68$ and $68 - 4 = 64$
So, $88 - 24 = 64$

(d) $64 - 17 = 64 - (10 + 7)$

Since, $64 - 10 = 54$ and $54 - 7 = 47$
So, $64 - 17 = 47$

(e) $64 - 28 = 64 - (20 + 8)$

Since, $64 - 20 = 44$ and $44 - 8 = 36$
So, $64 - 28 = 36$

(f) $55 - 46 = 55 - (40 + 6)$

Since, $55 - 40 = 15$ and $15 - 6 = 9$
So, $55 - 46 = 9$

(h) $73 - 27 = 73 - (20 + 7)$

Since, $73 - 20 = 53$ and $53 - 7 = 46$
So, $73 - 27 = 46$

Exercise 3.3

1. (a)

	H	T	O
	5	4	3
−	1	1	2
	4	3	1

(b)

	H	T	O
	7	6	3
−	2	4	1
	5	2	2

(c)

	H	T	O
	9	6	8
−	4	6	3
	5	0	5

(d)

	H	T	O
	7	5	3
−	1	4	2
	6	1	1

(e)

	H	T	O
	9	7	5
−	2	4	3
	7	3	2

(f)

	H	T	O
	8	6	5
−	4	2	3
	4	4	2

(g)

	H	T	O
	6	4	0
−	2	3	0
	4	1	0

(h)

	H	T	O
	9	6	4
−	5	2	3
	4	4	1

2. (a)

	Th	H	T	O
	9	6	7	5
−	1	4	2	3
	8	2	5	2

(b)

	Th	H	T	O
	6	4	8	6
−	3	3	3	2
	3	1	5	4

(c)

	Th	H	T	O
	8	5	9	7
−	4	3	7	2
	4	2	2	5

(d)

	Th	H	T	O
	7	2	7	8
−	4	1	4	2
	4	1	3	6

(e)

	Th	H	T	O
	8	4	2	3
−	2	3	1	2
	6	1	1	1

(f)

	Th	H	T	O
	7	8	6	5
−	1	4	2	3
	6	4	4	2

(g)

	Th	H	T	O
	9	8	7	6
−	4	2	3	2
	5	6	4	4

(h)

	Th	H	T	O
	5	6	4	8
−	1	4	3	2
	4	2	1	6

3. (a)

	H	T	O
	8	7	5
−	1	5	7
	7	1	8

	H	T	O
	7	1	8
+	1	5	7
	8	7	5

(b)

	H	T	O
	6	5	8
−	4	3	2
	2	2	6

	H	T	O
	2	2	6
+	4	3	2
	6	5	8

(c)

	Th	H	T	O
	9	8	2	6
−	3	1	1	3
	6	7	1	3

	Th	H	T	O
	3	1	1	3
+	6	7	1	3
	9	8	2	6

(d)

	Th	H	T	O
	2	5	6	8
−	1	4	2	3
	1	1	4	5

	Th	H	T	O
	1	1	4	5
+	1	4	2	3
	2	5	6	8

4. (a)

	H	T	O
	9	4	7
−	8	3	6
	1	1	1

(b)

	H	T	O
	8	9	8
−	5	4	7
	3	5	1

(c)

	H	T	O
	7	4	8
−	2	1	4
	5	3	4

(d)

	Th	H	T	O
	3	5	8	4
−	1	2	4	3
	2	3	4	1

(e)

	Th	H	T	O
	8	6	9	6
−	2	0	8	2
	6	6	1	4

(f)

	Th	H	T	O
	9	7	7	5
−	2	3	4	5
	7	4	3	0

Exercise 3.4

1. (a)

	H	T	O
	5	4	2
−	2	3	7
	3	0	5

(b)

	H	T	O
	9	3	7
−	4	5	8
	4	7	9

(c)

	H	T	O
	4	3	8
−	1	7	5
	2	6	3

(d)

	H	T	O
	9	4	3
−	1	9	6
	7	4	7

(e)

	H	T	O
	5	6	4
−	2	7	8
	2	8	6

(f)

	H	T	O
	8	3	5
−	2	9	8
	5	3	7

(g)

	Th	H	T	O
	4	9	6	2
−	3	3	1	8
	1	6	4	4

(h)

	Th	H	T	O
	4	7	4	3
−	2	3	6	9
	2	3	7	4

(i)

	Th	H	T	O
	7	3	5	2
−	3	6	9	8
	3	6	5	4

(j)

	Th	H	T	O
	5	4	2	3
−	2	7	6	5
	2	6	5	8

(k)

	Th	H	T	O
	6	7	8	1
−	5	8	9	4
	0	8	8	7

(l)

	Th	H	T	O
	4	3	5	6
−	1	2	7	8
	3	0	7	8

2. (a)

	H	T	O
	9	6	4
−	2	3	7
	7	2	7

(b)

	H	T	O
	8	4	2
−	4	5	3
	3	8	9

(c)

	Th	H	T	O
	5	1	2	4
−	2	4	2	5
	2	6	9	9

(d)

	Th	H	T	O
	6	2	1	3
−	1	7	6	5
	4	4	4	8

(e)

	Th	H	T	O
	5	4	7	5
−	4	3	8	8
	1	0	8	7

(f)

	Th	H	T	O
	9	6	5	3
−	7	0	4	2
	2	6	1	1

Exercise 3.5

1. (a)

	H	T	O
	9	4	0
−	1	8	7
	7	5	3

(b)

	H	T	O
	8	0	0
−	3	4	9
	4	5	1

(c)

	Th	H	T	O
	5	4	6	0
−	1	9	4	8
	3	5	1	2

(d)

	Th	H	T	O
	7	0	8	0
−	2	9	3	9
	4	1	4	1

(e)

	Th	H	T	O
	7	8	0	0
−	5	4	9	3
	2	3	0	7

(f)

	Th	H	T	O
	6	2	0	0
−	4	4	6	5
	1	7	3	5

(g)

	Th	H	T	O
	5	0	4	0
−	3	7	2	9
	1	3	1	1

(h)

	Th	H	T	O
	6	0	3	0
−	4	1	8	9
	1	8	4	1

2. (a)

	2	2	4	0
+	1	1	4	0
	3	3	8	0

	3	3	8	0
−	2	0	3	0
	1	3	5	0

So, 2240 + 1140 – 2030 = 1350

(b)

	6	5	7	0
+	2	0	3	4
	8	6	0	4

	8	6	0	4
−		8	5	5
	7	7	4	9

So, 6570 + 2034 – 855 = 7749

(c)

	4	3	9	6
−		1	7	0
	4	2	2	6

	4	2	2	6
+	1	4	0	0
	5	6	2	6

So, 4396 – 170 + 1400 = 5626

(d)

	2	2	0	4
−	1	1	0	0
	1	1	0	4

	1	1	0	4
+		4	5	0
	1	5	5	4

	1	5	5	4
−		5	2	4
	1	0	3	0

So, 2204 – 1100 + 450 – 524 = 1030

(e)

	6	4	9	0
+	2	4	5	0
	8	9	4	0

	8	9	4	0
−	4	7	5	0
	4	1	9	0

	4	1	9	0
−		6	3	0
	3	5	6	0

So, 6490 + 2450 – 4750 – 630 = 3560

(f)

	3	4	2	0
−		3	0	0
	3	1	2	0

	3	1	2	0
+		5	6	4
	3	6	8	4

	3	6	8	4
−	1	1	3	4
	2	5	5	0

So, 3420 – 300 + 564 – 1134 = 2550

Exercise 3.6

1.

S.No.	Actual number	Estimated number
(a)	55	50
(b)	22	30
(c)	166	160
(d)	171	170
(e)	2889	2880
(f)	4690	4690

(a)

	Actual		Estimated
	7	3	7 0
−	1	8	2 0
	5	5	> 5 0

(b)

	Actual		Estimated
	5	5	6 0
−	3	3	3 0
	2	2	< 3 0

(c)

	Actual			Estimated
	3	7	4	3 7 0
−	2	0	8	2 1 0
	1	6	6	> 1 6 0

(d)

	Actual			Estimated
	5	4	8	5 5 0
−	3	7	7	3 8 0
	1	7	1	> 1 7 0

(e)

	Actual				Estimated
	4	3	6	2	4 3 6 0
−	1	4	7	3	1 4 8 0
	2	8	8	9	> 2 8 8 0

(f)

	Actual				Estimated
	7	0	9	5	7 1 0 0
−	2	4	0	5	2 4 1 0
	4	6	9	0	= 4 6 9 0

Exercise 3.7

1. (a) Number of persons visited Mughal Garden on weekend = 4260
Number of persons visited Mughal Garden on Saturday = 2240
Number of persons visited Mughal Garden on Sunday = 2020

(b) Number of stamps in Rakhi's collection = 875
Number of stamps in given to Geeta = − 255
Number of stamps in left with Rakhi = 620

(c) Number of voters present in on area = 8940
Number of voters casted their votes = − 6995
Number of voters not casted their votes = 1945

(d) Number of points scored by Rajan = 9364
Number of points scored by Sameer = − 740
= 8624

(e) Number of laptops manufactured = 8750
Number of laptops sold = − 5450
Number of laptops remained = 3300

2. (a) Number of males came = 1240
Number of females came = + 760
Total number of persons = 2000

Total number seats available = 2840
Number of seats used = − 2000
Number of seats vacant = 840

(b) The cost of a mobile = ₹6420
The cost of a watch = + ₹2500
Total amount spent = ₹3920

Amount money had = ₹9750
Amount spent = − ₹3920
Amount left = ₹5830

(c) Quantity of sugar sold as a day = 1567kg
Quantity of sugar sold as other day = + 1220kg
Quantity of sugar sold on both day = 2787kg

Quantity of sugar shopkeeper had = 5000kg
Quantity of sugar shopkeeper sold = − 2787kg
Quantity of sugar shopkeeper left = 2213kg

(d) Quantity of water in a tanker = 5050L
Quantity of water in other tanker = + 4960L
Total quantity of water in both tankers = 10010L

Quantity of water available = 10010 L
Quantity of water supplied = − 6240 L
Quantity of water left = 3770 L

(e) Number of blue marbles = 1260
Number of green marbles = + 2240
Number of blue and green marbles = 3500

Total number of marbles available = 6220
Number of blue and green marbles = − 3500
Number of black marbles = 2720

3. (a) Number of men working in a factory = 765
Number of women working in a factory = − 540
Difference in numbers = 225

Extra information : There are 420 machines in the factory.

(b) Amount deposited in account = ₹5500
Amount deposited again in account = + ₹3500
Total amount in the account = ₹9000

Now, amount available in account = ₹9000
Amount withdrew from account = − ₹6000
The current balance in account = ₹3000

(c) Total number of balls = 1470
Number of blue balls = − 570
Number of red balls = 900
Extra information : She gave 140 red balls and 240 blue balls to her sister.

(d) Total number of students = 4240
Number of boys = − 2450
Number of girls = 1790

4. Do it yourself.

Revision Exercise

1. (a)

	H	T	O
	6	3	2
−	3	2	1
	3	1	1

(b)

	H	T	O
	7	8	6
−	2	3	4
	5	5	2

(c)

	H	T	O
	3	7	2
−	2	4	8
	1	2	4

(d)

	H	T	O
	9	7	6
−	1	2	3
	8	5	3

(e)

	Th	H	T	O
	8	4	3	2
−	1	2	3	1
	7	2	0	1

(f)

	Th	H	T	O
	7	6	8	4
−	1	3	2	3
	6	3	6	1

(g)
Th	H	T	O
9	6	4	8
− 2	3	2	3
7	3	2	5

(h)
Th	H	T	O
7	0	0	0
− 1	6	8	9
5	3	1	1

2. (a)
7	6	4
− 2	8	7
4	7	7

(b)
9	6	7
− 3	5	8
6	0	9

(c)
4	8	9	6
− 2	3	7	5
2	5	2	1

(d)
9	3	2	1
− 4	8	6	5
4	4	5	6

(e)
7	0	0	9
− 4	7	6	3
2	2	4	6

(f)
5	6	4
+ 3	6	4
9	2	8

9	2	8
− 2	0	0
7	2	8

(g)
	4	3	6	4
+	8	6	7	6
1	3	0	4	0

1	3	0	4	0
−	3	5	6	4
1	0	4	7	6

(h)
9	7	6	4
− 2	4	3	6
7	3	2	8

7	3	2	8
− 5	3	2	6
2	0	0	2

(i)
7	5	7	5
− 6	2	6	4
1	3	1	1

1	3	1	1
+	1	4	5
1	4	5	6

3. (a)
Actual		Estimated	
8	4	8	0
− 3	7	4	0
4	7	4	0

(b)
Actual			Estimated		
4	6	8	4	7	0
− 2	7	1	2	7	0
1	9	7	2	0	0

(c)
Actual				Estimated			
1	4	5	5	1	4	6	0
−	9	7	4		9	7	0
	4	8	1		4	9	0

(d)
Actual				Estimated			
2	4	3	7	2	4	4	0
−	4	6	8	4	7	0	
1	9	6	9	1	9	7	0

4. (a) Present year = 20% = 2023
Year in which India won the first cricket World Cup = 1983
Number of year passed away = 0040
Thus, India won the first cricket World Cup 40 years before.

(b) Total quantity of water available = 4260 L
Total quantity of water supplied = 3795 L
Total quantity of water left = 465 L

(c) The cost of a sofa-set = ₹5430
The cost of some furniture = ₹2754
The amount left = ₹2676

5. Do it yourself.

HOTS

1. (a)
Th	H	T	O
8	4	5	A
− 4	B	7	8
C	7	D	5

Th	H	T	O
8	4	5	3
− 4	6	7	8
3	7	7	5

Thus, A = 3, B = 6, C = 3 and D = 7.

(b)
Th	H	T	O
D	2	A	4
− 2	6	9	8
4	B	0	C

Th	H	T	O
7	2	0	4
− 2	6	9	8
4	5	0	6

Thus, A = 0, B = 5, C = 6 and D = 7.

(c)
Th	H	T	O
A	B	5	7
− 3	4	7	C
2	9	D	9

Th	H	T	O
6	4	5	7
− 3	4	7	8
2	9	7	9

Thus, A = 6, B = 4, C = 8 and D = 7.

(d)
Th	H	T	O
8	7	A	0
− B	4	6	9
6	C	3	D

Th	H	T	O
8	7	0	0
− 2	4	6	9
6	2	3	1

Thus, A = 0, B = 2, C = 2 and D = 1.

2. (a) A = 7654 – 2648 = 5006
B = 1436 – 567 = 869
C = 1212 – B = 1212 – 869 = 343
D = 3794 – C = 3794 – 343 = 3451

(b) A = 8676 – 6764 = 1912
B = 5432 – 4360 = 1072
C = A – 1332 = 1912 – 1332 = 580
D = C – 260 = 320

3. Pallavi's age = 13 years

Her grandfather's age
= 65 years + 13 years = 78 years

Her father's age
= 78 years – 36 years = 42 years

Her mother's age
= 42 years – 4 years = 38 years

Age of grandfather = 78 years

Age of father = 42 years

Age of mother = 38 years

Case-based Questions

1. The height of Nanda Devi = 7816m
The height of Anamudi = − 2695m
The difference in heights = 5121m
Thus, (a) is the correct answer.

2. The height of Doddabetta = 2637m
The height of Saddle peak = − 732m
The difference in heights = 1905m
Thus, (b) is the correct answer.

3. The height of Kanchenjunga = 8586m
The height of Nanda Devi = − 7816m
The difference in heights = 770m
Thus, (b) is the correct answer.

4. The sum of heights of two mountains = 11323m
The height of Doddabetta = − 2637m
The height of other mountain = 8686m
The mountain having height 8686 m is Kanchenjunga.
Thus, (b) is the correct answer.

5. The height of Anamudi = 2695m
The height of Saddle peak = − 732m
Difference = 1963m
Thus, (a) is the correct answer.

Mental Maths

A. 1. 5864 – 0 = 5864 2. 7648 – 7648 = 0
3. 9361 – 1 = 9360 4. 5432 – 10 = 5422
5. 8341 – 100 = 8241 6. 4867 – 1000 = 3867
7. 7100 – 4862 = 2238
8. 1000 – 765 = 235
9. If 5631 + 1436 = 7067
then 7067 – 1436 = 5631
and 7067 – 5631 = 1436.
10. If 843 + 973 = 1816
then _____ – 973 = 843
and _____ – 843 = 973.

B. 1. False 2. False
3. True 4. False
5. True

Test your knowledge-1

1. (a) (iii) (b) (iv)
(c) (i) (d) (ii)

2.

S.No.	Number	Number name
(a)	5842	Five thousand eight hundred forty-two
(b)	8542	Eight thousand five hundred forty-two
(c)	8524	Eight thousand five hundred twenty-four
(d)	5824	Five thousand eight hundred twenty-four

3. (a) 24 → 20 (b) 78 → 80
(c) 45 → 50

4. (a) XXI > XIX (b) XLIII > XVIII
(c) LXII > LV

5. (a) 2546, 2646, 2746, 2846, 2946, 3046, 3146, 3246
(b) 4968, 4978, 4988, 4998, 5008, 5018, 5028, 5038

6. Do it yourself.

7. (a)

	Th	H	T	O
	2	7	3	6
+	3	2	6	4
		1	0	4
	6	1	0	4

(b)

	Th	H	T	O
		3	4	5
+	4	7	3	2
	2	1	4	1
	7	2	1	8

(c)

	Th	H	T	O
	8	4	6	4
+		5	6	4
	9	0	2	8

8. (a)

	Th	H	T	O
	9	4	6	4
−		8	7	5
	8	5	8	9

(b)

	Th	H	T	O
	8	0	0	4
−	2	4	3	6
	5	5	6	8

(c)

	Th	H	T	O
	8	0	0	9
−		4	2	4
	7	5	8	5

9. (a)

	Th	H	T	O
	2	4	8	6
+	3	1	3	6
	5	6	2	2

	Th	H	T	O
	5	6	2	2
−		5	6	7
	5	0	5	5

(b)

	TTh	Th	H	T	O
		8	4	3	6
+		2	4	1	1
	1	0	8	4	7

	TTh	Th	H	T	O
	1	0	8	4	7
−		7	3	6	1
		3	4	8	6

(c)

	Th	H	T	O
	5	0	0	0
+	4	6	7	3
	9	6	7	3

	Th	H	T	O
	9	6	7	3
−	2	3	6	1
	7	3	1	2

10. (a)

	8	5	2	1
−	6	0	0	2
	2	5	1	9

(b)

	3	5	3	4
−	1	4	6	6
	5	0	0	0

(c)

	8	2	5	2
−	6	5	1	4
	1	7	3	8

11. (a) Number of mobile sets sold in March = 3067
Number of mobile sets sold in April + 2485
Total number of mobile sets sold = 5552

(b) Total number of seats in stadium = 2485
Number of vacant seats − 572
Number of people who saw match = 1913

12. Solve the following puzzle.

Across

1. Numeral for two thousand one hundred thirty-four = 2134
2. Predecessor of 5673 = 5673 – 1 = 5672
3. 1000 more than 6947 = 6947 + 1000 = 7947
4. The greatest 4-digit number with 5, 8, 9 and 4 without repeating = 9854
5. The greatest 4-digit even number = 9998

Down

6. Short form of 3000 + 700 + 40 + 3 = 3743
7. Successor of 1548 = 1548 + 1 = 1549
8. The number with 3 thousands, 6 hundreds, 7 tens and 8 ones = 3678.
9. The greatest number among 2268, 375 and 2948 = 2948.
10. The greatest 4-digit odd number = 9999.

Chapter 4. Multiplication

Recap

1. (a) 6 + 6 + 6 = 3 × 6 = 18
(b) 7 + 7 + 7 + 7 = 4 × 7 = 28
(c) 8 + 8 + 8 + 8 + 8 = 5 × 8 = 40
(d) 3 + 3 + 3 + 3 = 4 × 3 = 12

2.

S.No.	Multiplication fact	Multiplicand (Factor)	Multiplier (Factor)	Product
(a)	4 × 3 = 12	4	3	12
(b)	2 × 7 = 14	2	7	14
(c)	5 × 6 = 30	5	6	30
(d)	7 × 9 = 63	7	9	63
(e)	2 × 8 = 16	2	8	16

3.

1 × 2 = 2	1 × 3 = 3	1 × 4 = 4	1 × 5 = 5
2 × 2 = 4	2 × 3 = 6	2 × 4 = 8	2 × 5 = 10
3 × 2 = 6	3 × 3 = 9	3 × 4 = 12	3 × 5 = 15
4 × 2 = 8	4 × 3 = 12	4 × 4 = 16	4 × 5 = 20
5 × 2 = 10	5 × 3 = 15	5 × 4 = 20	5 × 5 = 25
6 × 2 = 12	6 × 3 = 18	6 × 4 = 24	6 × 5 = 30
7 × 2 = 14	7 × 3 = 21	7 × 4 = 28	7 × 5 = 35
8 × 2 = 16	8 × 3 = 24	8 × 4 = 32	8 × 5 = 40
9 × 2 = 18	9 × 3 = 27	9 × 4 = 36	9 × 5 = 45
10 × 2 = 20	10 × 3 = 30	10 × 4 = 40	10 × 5 = 50

4. (a) 5 × 4 = 20
(b) 9 × 3 = 27
(c) 7 × 4 = 28
(d) 7 × 3 = 21
(e) 6 × 2 = 12
(f) 8 × 2 = 16
(g) 8 × 5 = 40
(h) 10 × 5 = 50

5. (a)

	3	2
×		4
	1	2	8

(b)

	4	3
×		2
	8	6

(c)
$$\begin{array}{r} 53 \\ \times\ \ 2 \\ \hline 106 \end{array}$$

(d)
$$\begin{array}{r} 63 \\ \times\ \ 5 \\ \hline 315 \end{array}$$

Exercise 4.1

1. (a) $34 \times 0 = \underline{0}$ (b) $2 \times 4 = \underline{4} \times 2$
   (c) $24 \times 1 = \underline{24}$ (d) $96 \times \underline{1} = 96$
   (e) $76 \times 2 = 2 \times \underline{76}$ (f) $38 \times \underline{0} = 0$
   (g) $12 \times 4 \times 0 = \underline{0}$ (h) $13 \times 8 = 8 \times \underline{13}$
   (i) $6 \times 0 \times 5 = \underline{0}$ (j) $8 \times 1 = \underline{8}$
   (k) $9 \times \underline{1} = 9$ (l) $27 \times \underline{0} = 0$
2. (a) $7 \times 10 = \underline{70}$ (b) $8 \times 10 = \underline{80}$
   (c) $10 \times 4 = \underline{40}$ (d) $10 \times 42 = \underline{420}$
   (e) $5 \times 100 = \underline{500}$ (f) $8 \times 100 = \underline{800}$
   (g) $100 \times 21 = \underline{2100}$ (h) $100 \times 72 = \underline{7200}$
   (i) $3 \times 1000 = \underline{3000}$
3. (a) $8 \times 20 = \underline{160}$ (b) $12 \times 30 = \underline{360}$
   (c) $16 \times 40 = \underline{640}$ (d) $80 \times 14 = \underline{1120}$
   (e) $70 \times 13 = \underline{910}$ (f) $60 \times 15 = \underline{900}$
   (g) $13 \times 80 = \underline{1040}$ (h) $18 \times 90 = \underline{1620}$
   (i) $24 \times 50 = \underline{1200}$
4. (a) $71 \times 200 = \underline{14200}$ (b) $7 \times 800 = \underline{5600}$
   (c) $9 \times 600 = \underline{5400}$ (d) $300 \times 3 = \underline{900}$
   (e) $500 \times 9 = \underline{4500}$ (f) $700 \times 4 = \underline{2800}$
   (g) $8 \times 900 = \underline{7200}$ (h) $16 \times 300 = \underline{4800}$
   (i) $400 \times 3 = \underline{1200}$

Exercise 4.2

1.

×	0	1	2	3	4	5	6	7	8	9	10
10	0	10	20	30	40	50	60	70	80	90	100
11	0	11	22	33	44	55	66	77	88	99	110
12	0	12	24	36	48	60	72	84	96	108	120
13	0	13	26	39	52	65	78	91	104	117	130
14	0	14	28	42	56	70	84	98	112	126	140
15	0	15	30	45	60	75	90	105	120	135	150
16	0	16	32	48	64	80	96	112	128	144	160
17	0	17	34	51	68	85	102	119	136	153	170
18	0	18	36	54	72	90	108	126	144	162	180
19	0	19	38	57	76	95	114	133	152	171	190
20	0	20	40	60	80	100	120	140	160	180	200

2. (a) 3, 6, 9, <u>12, 15, 18</u>
   (b) 8, 16, 24, <u>32, 40, 48</u>
   (c) 24, 36, 48, <u>60, 72, 84</u>
   (d) 15, 20, 25, <u>30, 35, 40</u>
   (e) 16, 20, 24, <u>28, 32, 36</u>
   (f) 21, 28, 35, <u>42, 49, 56</u>
   (g) 13, 26, 39, <u>52, 65, 78</u>
   (h) 20, 40, 60, <u>80, 100, 120</u>

Exercise 4.3

1. (a)
$$\begin{array}{r} \text{T}\ \ \text{O} \\ 33 \\ \times\ \ 2 \\ \hline 66 \end{array}$$

(b)
$$\begin{array}{r} \text{T}\ \ \text{O} \\ 11 \\ \times\ \ 8 \\ \hline 88 \end{array}$$

(c)
$$\begin{array}{r} \text{T}\ \ \text{O} \\ 24 \\ \times\ \ 2 \\ \hline 48 \end{array}$$

(d)
$$\begin{array}{r} \text{T}\ \ \text{O} \\ 58 \\ \times\ \ 1 \\ \hline 58 \end{array}$$

(e)
$$\begin{array}{r} \text{H}\ \ \text{T}\ \ \text{O} \\ 324 \\ \times\ \ \ \ 2 \\ \hline 648 \end{array}$$

(f)
$$\begin{array}{r} \text{H}\ \ \text{T}\ \ \text{O} \\ 223 \\ \times\ \ \ \ 3 \\ \hline 669 \end{array}$$

(g)
$$\begin{array}{r} \text{H}\ \ \text{T}\ \ \text{O} \\ 122 \\ \times\ \ \ \ 4 \\ \hline 488 \end{array}$$

(h)
$$\begin{array}{r} \text{H}\ \ \text{T}\ \ \text{O} \\ 242 \\ \times\ \ \ \ 2 \\ \hline 484 \end{array}$$

(i)
$$\begin{array}{r} \text{H}\ \ \text{T}\ \ \text{O} \\ 232 \\ \times\ \ \ \ 3 \\ \hline 696 \end{array}$$

(j)
$$\begin{array}{r} \text{H}\ \ \text{T}\ \ \text{O} \\ 304 \\ \times\ \ \ \ 2 \\ \hline 608 \end{array}$$

(k)
$$\begin{array}{r} \text{H}\ \ \text{T}\ \ \text{O} \\ 313 \\ \times\ \ \ \ 3 \\ \hline 939 \end{array}$$

(l)
$$\begin{array}{r} \text{H}\ \ \text{T}\ \ \text{O} \\ 234 \\ \times\ \ \ \ 2 \\ \hline 468 \end{array}$$

2. (a)
$$\begin{array}{r} \text{T}\ \ \text{O} \\ 12 \\ \times\ \ 4 \\ \hline 48 \end{array}$$

(b)
$$\begin{array}{r} \text{T}\ \ \text{O} \\ 17 \\ \times\ \ 1 \\ \hline 17 \end{array}$$

(c)
	T	O
×	2	3
		3
	6	9

(d)
	T	O
×	1	0
		7
	7	0

(e)
	H	T	O
×	1	2	3
			3
	3	6	9

(f)
	H	T	O
×	2	0	2
			4
	8	0	8

(g)
	T	O
×	1	7
		1
	1	7

(h)
	T	O
×	3	2
		3
	9	6

(i)
	T	O
×	2	3
		2
	4	6

(j)
	H	T	O
×	1	4	2
			2
	2	8	4

(k)
	H	T	O
×	2	3	2
			3
	6	9	6

(l)
	H	T	O
×	2	0	4
			2
	4	0	8

Exercise 4.4

1. (a)
	H	T	O
×		3	2
			8
	2	5	6

(b)
	Th	H	T	O
×		7	6	2
				5
	3	8	1	0

(c)
	Th	H	T	O
×		9	4	3
				7
	6	6	0	1

(d)
	H	T	O
×		9	8
			2
	1	9	6

(e)
	H	T	O
×	1	9	6
			3
	5	8	8

(f)
	Th	H	T	O
×		5	5	5
				5
	2	7	7	5

(g)
	Th	H	T	O
×		8	4	3
				6
	5	0	5	8

(h)
	H	T	O
×	2	2	4
			3
	6	7	2

(i)
	H	T	O
×		4	9
			9
	4	4	1

(j)
	H	T	O
×	1	7	5
			5
	8	7	5

(k)
	H	T	O
×	1	1	8
			8
	9	4	4

(l)
	Th	H	T	O
×		7	6	4
				8
	6	1	1	2

2. (a)
	H	T	O
×		4	2
			9
	3	7	8

(b)
	H	T	O
×	2	1	6
			4
	8	6	4

(c)
	Th	H	T	O
×		3	8	4
				3
	1	1	5	2

(d)
	H	T	O
×	4	2	5
			2
	8	5	0

(e)
	Th	H	T	O
×		2	5	3
				9
	1	2	6	1

(f)
	Th	H	T	O
×		4	6	7
				9
	1	8	6	8

(g)
	H	T	O
×		6	8
			7
	4	7	6

(h)
	Th	H	T	O
×		3	2	6
				4
	1	3	0	4

(i)
	Th	H	T	O
×		5	0	8
				9
	4	5	7	2

(j)
	H	T	O
×		1	6
			9
	1	4	4

(k)
	Th	H	T	O
×		7	6	8
				2
	1	5	3	6

(l)
	Th	H	T	O
×		3	2	6
				8
	2	6	0	8

(m)
	Th	H	T	O
×		2	8	4
				7
	1	9	8	8

(n)
	Th	H	T	O
×		3	4	7
				6
	2	0	8	2

(o)
	Th	H	T	O
×		4	0	2
				8
	3	2	1	6

(p)
	H	T	O
×	1	7	3
			5
	8	6	5

Exercise 4.5

1. (a)

	H	T	O
×		3	2
		2	3
+		9	6
	6	4	0
	7	3	6

(b)

	H	T	O
×		2	1
		1	4
+		8	4
	2	1	0
	2	9	4

(c)

	H	T	O
×		4	2
		1	2
+		8	4
	4	2	0
	5	0	4

(d)

	H	T	O
×		1	7
		1	1
+		1	7
	1	7	0
	1	8	7

(e)

	Th	H	T	O
×		1	3	0
			2	2
+		2	6	0
	2	6	0	0
	2	8	6	0

(f)

	Th	H	T	O
×		2	3	2
			2	3
+		6	9	6
	4	6	4	0
	5	3	3	6

(g)

	Th	H	T	O
×		1	4	2
			2	2
+		2	8	4
	2	8	4	0
	3	1	2	4

(h)

	Th	H	T	O
×		2	1	2
			1	4
+		8	4	8
	2	1	2	0
	2	9	6	8

2. (a)

	H	T	O
×		3	6
		2	2
+		7	2
	7	2	0
	7	9	2

(b)

	Th	H	T	O
×		2	4	3
			3	4
+		9	7	2
	7	2	9	0
	8	2	6	2

(c)

	Th	H	T	O
×		1	7	4
			2	3
+		5	2	2
	3	4	8	0
	4	0	0	2

(d)

	H	T	O
×		4	7
		1	2
+		9	4
	4	7	0
	5	6	4

(e)

	Th	H	T	O
×		1	1	6
			2	3
+		3	4	8
	2	3	2	0
	2	6	6	8

(f)

	Th	H	T	O
×			4	6
		1	4	8
+		3	6	8
	4	6	0	0
	6	8	0	8

(g)

	Th	H	T	O
×		1	5	8
			1	4
+		6	3	2
	1	5	8	0
	2	2	1	2

(h)

	Th	H	T	O
×		2	2	7
			3	8
+	1	8	1	6
	6	8	1	0
	8	6	2	6

3. (a)

	Th	H	T	O
×			4	3
			2	7
+		3	0	1
		8	6	0
	1	1	6	1

(b)

	Th	H	T	O
×		3	2	4
			1	5
+	1	6	2	0
	3	2	4	0
	4	8	6	0

(c)

	Th	H	T	O
×		4	0	3
			2	0
+		0	0	0
	8	0	6	0
	8	0	6	0

(d)

	Th	H	T	O
×			7	7
			5	5
+		3	8	5
	3	8	5	0
	4	2	3	5

(e)

	Th	H	T	O
×		4	0	1
			2	4
+	1	6	0	4
	8	0	2	0
	9	6	2	4

(f)

	Th	H	T	O
×			6	4
			7	2
+		1	2	8
	4	4	8	0
	4	6	0	8

(g)

	Th	H	T	O
×			8	2
			6	4
+		3	2	8
	4	9	2	0
	5	2	4	8

(h)

	Th	H	T	O
×			2	4
			7	5
+		1	2	0
	1	6	8	0
	1	8	0	0

(i)

	Th	H	T	O
×		2	4	5
			3	4
+		9	8	0
	7	3	5	0
	8	3	3	0

(j)

	Th	H	T	O
×		6	3	2
			1	1
+		6	3	2
	6	3	2	0
	6	9	5	2

(k)

	Th	H	T	O
×		3	0	9
			2	1
+		3	0	9
	1	1	8	0
	6	4	8	9

(l)

	Th	H	T	O
×			4	8
			5	6
+		2	8	8
	2	4	0	0
	2	6	8	8

Exercise 4.6

1. (a) We have 46×8

$46 = 40 + 6$

Multiplying 40 and 6 by 8 separately, we get

$[40 \times 8 = 320]$ $[6 \times 8 = 48]$

Sum of products $= 320 + 48$

$= 368$

So, $46 \times 8 = 368$.

(b) We have 72×9

$72 = 70 + 2$

Multiplying 70 and 2 by 9 separately, we get

$[70 \times 9 = 630]$ $[2 \times 9 = 18]$

Sum of products $= 630 + 18 = 648$

So, $72 \times 9 = 648$

(c) We have 24×8

$24 = 20 + 4$

Multiplying 20 and 4 by 8 separately, we get

$[20 \times 8 = 160]$ $[4 \times 8 = 32]$

Sum of products $= 160 + 32 = 192$

So, $24 \times 8 = 192$

(d) We have 32×7

$32 = 30 + 2$

Multiplying 30 and 2 by 7 separately, we get

$[30 \times 7 = 210]$ $[2 \times 7 = 14]$

Sum of products $= 210 + 14 = 224$

So, $32 \times 7 = 224$

(e) We have 26×8

$26 = 20 + 6$ and $18 = 10 + 8$

Multiplying 20 and 6 by 8 separately, we get

10 $[20 \times 10 = 200]$ $[6 \times 10 = 60]$

$[20 \times 8 = 160]$ $[6 \times 8 = 48]$

Sum of products $= 200 + 160 + 60 + 48 = 468$

Thus, $26 \times 18 = 468$

(f) We have 24×22

$24 = 20 + 4$ and $22 = 20 + 2$

Multiplying 20 and 4 by 20 and 2 separately, we get

20$[20 \times 20 = 400]$ $[4 \times 20 = 80]$

2$[20 \times 2 = 40]$ $[4 \times 2 = 8]$

Sum of products $= 400 + 40 + 80 + 8 = 528$

Thus, $24 \times 22 = 528$

(g) We have 62×13

$62 = 60 + 2$ and $13 = 10 + 3$

Multiplying 60 and 2 by 10 separately, we get

$[60 \times 10 = 600]$ $[2 \times 10 = 20]$

Multiplying 60 and 2 by 3 separately, we get

$[60 \times 3 = 180]$ $[2 \times 3 = 6]$

Sum of products $= 600 + 180 + 20 + 6 = 806$

Thus, $62 \times 13 = 806$

(h) We have 54×24

$54 = 50 + 4$ and $24 = 20 + 4$

Multiplying 50 and 4 by 20 separately, we get

$[50 \times 20 = 1000]$ $[4 \times 20 = 80]$

Multiplying 50 and 4 by 4 separately, we get

$[50 \times 4 = 200]$ $[4 \times 4 = 16]$

Sum of products $= 1000 + 200 + 80 + 16$
$= 1296$

Thus, $54 \times 24 = 1296$

(i) We have 62×24

$62 = 60 + 2$ and $24 = 20 + 4$

Multiplying 60 and 2 by 20 separately, we get

$[60 \times 20 = 1200]$ $[2 \times 20 = 40]$

Multiplying 60 and 2 by 4 separately, we get

$[60 \times 4 = 240]$ $[2 \times 4 = 8]$

Sum of products $= 1200 + 240 + 40 + 8 = 1488$

Thus, $62 \times 24 = 1488$

(j) We have 22×33

$29 = 20 + 9$ and $33 = 30 + 3$

Multiplying 20 and 9 by 30 separately, we get

$[20 \times 30 = 600]$ $[9 \times 30 = 270]$

Multiplying 20 and 9 by 3 separately, we get

$[20 \times 3 = 60]$ $[9 \times 3 = 27]$

Sum of products $= 600 + 60 + 270 + 27 = 957$

Thus, $29 \times 33 = 957$

(k) We have 38×35

$38 = 30 + 8$ and $35 = 30 + 5$

Multiplying 30 and 8 by 30 separately, we get

$[30 \times 30 = 900]$ $[8 \times 30 = 240]$

Multiplying 30 and 8 by 5 separately, we get

$[30 \times 5 = 150]$ $[8 \times 5 = 40]$

Sum of products $= 900 + 150 + 240 + 40 = 1330$

Thus, $38 \times 35 = 1330$

(l) We have 84×32

$84 = 80 + 4$ and $32 = 30 + 2$

Multiplying 80 and 4 by 30 separately, we get

$[80 \times 30 = 2400]$ $[4 \times 30 = 120]$

Multiplying 80 and 4 by 2 separately, we get

2 $[80 \times 2 = 160]$ $[4 \times 2 = 8]$

Sum of products $= 2400 + 160 + 120 + 8$
$= 2688$

Thus, $84 \times 32 = 2688$

2. (a) We have 24×9
Since $25 \times 10 = 250$ and $250 - 25 = 225$
So, $25 \times 9 = 225$.

(b) We have 34×9
Since $34 \times 10 = 340$ and $340 - 34 = 306$
So, $34 \times 9 = 306$.

(c) We have 88×9
Since $88 \times 10 = 880$ and $880 - 88 = 792$
So, $88 \times 9 = 792$.

(d) We have 26×9
Since $26 \times 10 = 260$ and $260 - 26 = 234$
So, $26 \times 9 = 234$.

(e) We have 22×99
Since $22 \times 100 = 2200$ and $2200 - 22 = 2178$
So, $22 \times 99 = 2178$.

(f) We have 72×99
Since $72 \times 100 = 7200$ and $7200 - 72 = 7128$
So, $72 \times 99 = 7128$.

(g) We have 37×99
Since $37 \times 100 = 3700$ and $3700 - 37 = 3663$
So, $37 \times 99 = 3663$.

(h) We have 64×99
Since $64 \times 100 = 6400$ and $6400 - 64 = 6336$
So, $64 \times 99 = 6336$.

(i) We have 55×9
Since $55 \times 10 = 550$ and $550 - 55 = 495$
So, $55 \times 9 = 495$.

(j) We have 86×9
Since $86 \times 10 = 860$ and $860 - 86 = 774$
So, $86 \times 9 = 774$.

(k) We have 68×99
Since $68 \times 100 = 6800$
and $6800 - 68 = 6732$
So, $68 \times 99 = 6732$.

(l) We have 37×99
Since $37 \times 100 = 3700$
and $3700 - 37 = 3663$
So, $37 \times 99 = 3663$.

3. (a) We have 23×11
Since $23 \times 10 = 230$ and $230 + 23 = 253$
So, $23 \times 11 = 253$.

(b) We have 72×11
Since $72 \times 10 = 720$ and $720 + 72 = 792$
So, $72 \times 11 = 792$.

(c) We have 68×11
Since $68 \times 10 = 680$ and $680 + 68 = 748$
So, $68 \times 11 = 748$.

(d) We have 73×11
Since $73 \times 10 = 730$ and $730 + 73 = 803$
So, $73 \times 11 = 803$.

(e) We have 46×11
Since $46 \times 10 = 460$ and $460 + 46 = 506$
So, $46 \times 11 = 506$.

(f) We have 65×11
Since $65 \times 10 = 650$ and $650 + 65 = 715$
So, $65 \times 11 = 715$.

(g) We have 58×11
Since $58 \times 10 = 580$ and $580 + 58 = 638$
So, $58 \times 11 = 638$.

(h) We have 94×11
Since $94 \times 10 = 940$ and $940 + 94 = 1034$
So, $94 \times 11 = 1034$.

4. (a) We have 63×11
Ones digit of $63 = 3$
Tens digit of $63 = 6$ and $6 + 3 = 9$.
So, $63 \times 11 = 693$

(b) We have 24×11
Ones digit of $24 = 4$
Tens digit of $24 = 2$ and $2 + 4 = 6$
So, $24 \times 11 = 264$.

(c) We have 27×11
Ones digit of $27 = 7$
Tens digit of $27 = 2$
and $2 + 7 = 9$
So, $27 \times 11 = 297$.

(d) We have 35×11
Ones digit of $35 = 5$
Tens digit of $35 = 3$
and $3 + 5 = 8$
So, $35 \times 11 = 385$.

(e) We have 42×11
Ones digit of $42 = 2$

Tens digit of 42 = 4
and 2 + 4 = 6
So, 42 × 11 = 462.

(f) We have 17 × 11
Ones digit of 17 = 7
Tens digit of 17 = 1
and 7 + 1 = 8
So, 17 × 11 = 187.

(g) We have 94 × 11
Ones digit of 94 = 4
Tens digit of 94 = 9
and 4 + 9 = 13
So, 94 × 11 = 1034.

(h) We have 63 × 11
Ones digit of 63 = 3
Tens digit of 63 = 6
and 3 + 6 = 9
So, 63 × 11 = 693.

(i) We have 55 × 11
Ones digit of 55 = 5
Tens digit of 55 = 5
and 5 + 5 = 10
So, 55 × 11 = 605.

(j) We have 48 × 11
Ones digit of 48 = 8
Tens digit of 48 = 4
and 8 + 4 = 12
So, 48 × 11 = 528.

(k) We have 72 × 11
Ones digit of 72 = 2
Tens digit of 72 = 7
and 2 + 7 = 9
So, 72 × 11 = 792.

(l) We have 29 × 11
Ones digit of 29 = 9
Tens digit of 29 = 2
and 9 + 2 = 11
So, 29 × 11 = 1012.

5. (a) We have 33 × 5
Half of (33 – 1 = 32)= 16
So, 33 × 5 = 165

(b) We have 42 × 5
Half of 42 = 21
So, 42 × 5 = 210

(c) We have 52 × 5
Half of 52 = 26
So, 52 × 5 = 260

(d) We have 160 × 5
Half of 160 = 80
So, 160 × 5 = 800

(e) We have 180 × 5
Half of 180 = 90
So, 180 × 5 = 900

(f) We have 95 × 5
Half of (95 – 1 = 94) = 47
So, 95 × 5 = 475

(g) We have 87 × 5
Half of (87 – 1 = 86) = 43
So, 87 × 5 = 435

(h) We have 45 × 5
Half of (45 – 1 = 44) = 22
So, 45 × 5 = 225

(i) We have 260 × 5
Half of 260 = 130
So, 260 × 5 = 1300

(j) We have 180 × 5
Half of 180 = 90
So, 180 × 5 = 900

(k) We have 154 × 5
Half of 154 = 77 So, 154 × 5 = 770

(l) We have 172 × 5
Half of 172 = 86 So, 172 × 5 = 860

Exercise 4.7

1. (a) We have 84 × 5
84 lies in between 80 and 90.
80 × 5 = 400 and 90 × 5 = 450
So, the product of 84 and 5 lies in between 400 and 450.
Now, 84 × 5 = 420

(b) We have 73 × 8
73 lies in between 70 and 80.
70 × 8 = 560 and 80 × 8 = 640

So, the product of 70 and 80 lies in between 560 and 640.

Now, $73 \times 8 = 584$

(c) We have 28×9
28 lies in between 20 and 30.
$20 \times 9 = 180$ and $30 \times 9 = 270$
So, the product of 28 and 9 lies in between 180 and 270.
Now, $28 \times 9 = 252$

(d) We have 27×3
27 lies in between 20 and 30.
$20 \times 3 = 60$ and $30 \times 3 = 90$
So, the product of 27 and 3 lies in between 60 and 90.
Now, $27 \times 3 = 81$

(e) We have 44×7
44 lies in between 40 and 50.
$40 \times 7 = 280$ and $50 \times 7 = 350$
So, the product of 280 and 350 lies in between 280 and 350.
Now, $44 \times 7 = 308$

(f) We have 56×8
56 lies in between 50 and 60.
$50 \times 8 = 400$ and $60 \times 8 = 480$.
So, the product of 56 and 8 lies in between 400 and 480.
Now, $56 \times 8 = 448$

(g) We have 26×7
26 lies in between 20 and 30.
$20 \times 7 = 140$ and $30 \times 7 = 210$.
So, the product of 26 and 7 lies in between 140 and 210.
Now, $26 \times 7 = 182$

(h) We have 54×5
54 lies in between 50 and 60.
$50 \times 5 = 250$ and $60 \times 5 = 300$.
So, the product of 54 and 5 lies in between 250 and 300.
Now, $54 \times 5 = 270$

(i) We have 73×6
73 lies in between 70 and 80.
$70 \times 6 = 420$ and $80 \times 6 = 480$.
So, the product of 73 and 6 lies in between 420 and 480.
Now, $73 \times 6 = 438$

(j) We have 48×9
48 lies in between 40 and 50.
$40 \times 9 = 360$ and $50 \times 9 = 450$.
So, the product of 48 and 9 lies in between 360 and 450.
Now, $48 \times 9 = 432$

(k) We have 57×8
57 lies in between 50 and 60.
$50 \times 8 = 400$ and $60 \times 8 = 480$.
So, the product of 57 and 8 lies in between 400 and 480.
Now, $57 \times 8 = 456$

(l) We have 62×6
62 lies in between 60 and 70.
$60 \times 6 = 360$ and $70 \times 6 = 420$.
So, the product of 62 and 6 lies in between 360 and 420.
Now, $62 \times 6 = 372$

2. (a) We have 42×18
42 rounds off 40 and 18 rounds off 20.
Estimated product $= 40 \times 20 = 800$
Actual product $= 42 \times 18 = 786$

(b) We have 24×15
24 rounds off 20 and 15 rounds off 20.
Estimated product $= 20 \times 20 = 400$
Actual product $= 24 \times 15 = 360$

(c) We have 73×27
73 rounds off 70 and 27 rounds off 30.
Estimated product $= 70 \times 30 = 2100$
Actual product $= 73 \times 27 = 1971$

(d) We have 56×28
56 rounds off 60 and 28 rounds off 30.
Estimated product $= 60 \times 30 = 1800$
Actual product $= 56 \times 28 = 1568$

(e) We have 29×13
29 rounds off 30 and 13 rounds off 10.
Estimated product $= 30 \times 10 = 300$
Actual product $= 29 \times 13 = 377$

(f) We have 14×18
14 rounds off 10 and 18 rounds off 20.
Estimated product $= 10 \times 20 = 200$
Actual product $= 14 \times 18 = 252$

(g) We have 85×16
85 rounds off 90 and 16 rounds off 20.
Estimated product $= 90 \times 20 = 1800$
Actual product $= 85 \times 16 = 1360$

(h) We have 24×18
24 rounds off 20 and 18 rounds off 20.
Estimated product $= 20 \times 20 = 400$
Actual product $= 24 \times 18 = 432$

(i) We have 21×25
21 rounds off 20 and 25 rounds off 30.
Estimated product $= 20 \times 30 = 600$
Actual product $= 21 \times 25 = 525$

(j) We have 27×36
27 rounds off 30 and 36 rounds off 40.
Estimated product $= 30 \times 40 = 800$
Actual product $= 27 \times 36 = 972$

(k) We have 44×35
44 rounds off 40 and 35 rounds off 40.
Estimated product $= 40 \times 40 = 1600$
Actual product $= 44 \times 35 = 1540$

(l) We have 56×24
56 rounds off 60 and 24 rounds off 20.
Estimated product $= 60 \times 20 = 1200$
Actual product $= 56 \times 24 = 1344$

Exercise 4.8

1. (a) Number of books in a racks = 72
Number of books in 32 racks $= 72 \times 32$

$$\begin{array}{r} 72 \\ \times\ 32 \\ \hline 144 \\ +\ 2160 \\ \hline 2304 \end{array}$$

Thus, there are 2304 books in 32 racks.

(b) The cost of a burger = ₹ 65
The cost of 28 burgers = ₹ 65×28

$$\begin{array}{r} 65 \\ \times\ 28 \\ \hline 520 \\ +\ 1300 \\ \hline 1820 \end{array}$$

Thus, the cost of 28 burgers is ₹ 1820.

(c) Number of people is a bus = 76
Number of people is 18 buses $= 76 \times 18$

$$\begin{array}{r} 76 \\ \times\ 18 \\ \hline 608 \\ +\ 760 \\ \hline 1368 \end{array}$$

Thus, 1368 people can sat in 18 buses.

(d) Number of tennis balls in a box = 75
Number of tennis balls in 24 boxes $= 75 \times 24$
Thus, there are 1800 balls in 24 boxes.

$$\begin{array}{r} 75 \\ \times\ 24 \\ \hline 300 \\ +\ 1500 \\ \hline 1800 \end{array}$$

(e) The number of pages in a book = 272
The number of pages in 16 such books
$= 272 \times 16$

$$\begin{array}{r} 272 \\ \times\ 16 \\ \hline 1632 \\ +\ 2720 \\ \hline 4352 \end{array}$$

Thus, 16 books have 4352 pages.

(f) The cost of a school bag = ₹342
The cost of 9 school bags = ₹342×9
= ₹3078
Thus, 9 school bags will cost ₹3078.

(g) The age of Sanjay = 12 years
The age of Sanjay's grandfather
$= 12 \times 6$ years = 72 years
Thus, the age of Sanjay's grandfather is 72 years

(h) Number of hours in a day = 24 hours
Number of hours in January = 31 days
So, the number of hours in 31 days
$= 24 \times 31$ hours = 804 hours

2. Do it yourself.

Revision Exercise

1. (a)
$$\begin{array}{r} \text{H T O} \\ 13 \\ \times\ 4 \\ \hline 52 \end{array}$$

(b)
$$\begin{array}{r} \text{H T O} \\ 24 \\ \times\ 5 \\ \hline 120 \end{array}$$

(c)
$$\begin{array}{r} \text{Th H T O} \\ 63 \\ \times\ 21 \\ \hline 63 \\ +\ 1260 \\ \hline 1323 \end{array}$$

(d)
$$\begin{array}{r} \text{H T O} \\ 45 \\ \times\ 16 \\ \hline 270 \\ +\ 450 \\ \hline 720 \end{array}$$

(e)
	Th	H	T	O
		2	4	3
×				7
	1	7	0	1

(f)
	Th	H	T	O
		2	4	4
×			1	3
		7	3	2
+	2	4	4	0
	3	1	7	2

(g)
	Th	H	T	O
		1	7	4
×			3	6
	1	0	4	4
+	5	2	2	0
	6	2	6	4

(h)
	Th	H	T	O
		4	4	5
×			1	2
		8	9	0
+	4	4	5	0
	5	3	4	0

(i)
	Th	H	T	O
			7	3
×			4	6
		4	3	8
+	2	9	2	0
	3	3	5	8

(j)
	Th	H	T	O
			8	4
×			3	5
		4	2	0
+	2	5	2	0
	3	0	0	0

(k)
	Th	H	T	O
			7	9
×			2	3
		2	3	7
+	1	5	8	0
	1	8	1	2

(l)
	Th	H	T	O
			4	8
×			3	4
		1	9	2
+	1	4	4	0
	1	6	3	2

2. (a)
	T	O
	2	6
×		2
	5	2

(b)
	H	T	O
		2	8
×			4
	1	1	2

(c)
	H	T	O
		1	5
×		1	3
		4	5
+	1	5	0
	1	9	5

(d)
	H	T	O
		1	6
×		1	2
		3	2
+	1	6	0
	1	9	2

(e)
	H	T	O
		2	4
×		1	4
		9	6
+	2	4	0
	3	3	6

(f)
	H	T	O
		3	5
×		1	4
	1	4	0
+	3	5	0
	4	9	0

(g)
	Th	H	T	O
			3	2
×			7	3
			9	6
+	2	2	4	0
	2	3	3	6

(h)
	H	T	O
	1	4	3
×			6
	8	5	8

(i)
	Th	H	T	O
		2	4	3
×				9
	2	1	8	7

(j)
	Th	H	T	O
		7	3	1
×				2
	1	4	6	7

(k)
	Th	H	T	O
		1	4	5
×			2	4
		5	8	0
+	2	9	0	0
	3	4	8	0

(l)
	Th	H	T	O
		2	4	8
×			2	5
	1	2	4	0
+	4	9	6	0
	6	2	0	0

3. (a) Number of bags carried by a tractor = 112
Number of bags carried by 8 tractors
= 112 × 8 = 896
Thus, 8 tractors can carry 896 bags of wheat.

(b) The distance covered by a boy in 1 minute = 96 m
The distance covered by a boy in 16 minutes
= 96 × 16 = 1536 m
Thus, the boy covered 1536 m in 16 minutes.

(c) Number of biscuits eaten by 1 child = 13
Number of biscuits eaten by 42 children
= 13 × 42 = 556 m
Thus, 42 children ate 556 biscuits.

(d) Number of players in a cricket team = 11
Number of players in 12 cricket teams
= 11 × 12 = 132
Thus, there are 132 players in IPL session-7.

HOTS

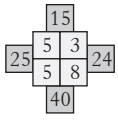
1. The cost of 1 chair = ₹215
So, the cost of 18 chairs = ₹215 × 18 = ₹3870
The cost of 1 table = ₹305
So, the cost of 15 tables = ₹305 × 15 = ₹4575
So, the total cost of 15 tables and 18 chairs
= ₹3870 + ₹4575 = ₹8445

2. The cost of 15 pens = ₹12 × 15 = ₹180
The cost of 12 pencils = ₹5 × 12 = ₹60
So, the total collection by selling pens and pencils
= ₹180 + ₹60 = ₹240

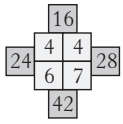
Fun Time

(a) 3 × 4 = 12
3 × 5 = 15
5 × 7 = 35
4 × 7 = 28

(b) $5 \times 5 = 25$
$5 \times 3 = 15$
$3 \times 8 = 24$
$5 \times 8 = 40$



(c) $6 \times 7 = 42$
$4 \times 7 = 28$
$4 \times 4 = 16$
$4 \times 6 = 24$



Case-based Questions

1. Number of sandwiches packed
$= 4 \times 5 = 4 + 4 + 4 + 4 + 4$
Thus, (d) is the correct answer.
2. Number of paper plates in 3 packets $= 3 \times 6 = 18$
Thus, (c) is the correct answer.
3. Number of sandwiches $= 4 \times 5 = 20$
The cost of 1 sandwich = ₹2
The cost of 20 sandwiches = ₹2×20 = ₹40
Thus, (c) is the correct answer.
4. The number of paper plates = 18
The cost of 1 paper plate = ₹10
The cost of 18 paper plates = ₹10×18 = ₹180
Thus, (d) is the correct answer.
5. The number of 1 paper plates = ₹10
The cost of 12 paper plates = ₹12×10 = ₹120
Thus, (a) is the correct answer.

Mental Maths

A. 1. $10 \times \underline{32} = 320$ 2. $\underline{70} \times 10 = 700$
3. $5 \times \underline{100} = 500$ 4. $5 \times 8 = \underline{40}$
5. $5 \times 7 = \underline{35}$ 6. $3 \times \underline{4} = 12$
7. $\underline{6} \times 7 = 42$ 8. $72 \times 1 = \underline{72}$
9. $44 \times \underline{0} = 0$ 10. $27 \times 18 = 18 \times \underline{27}$
11. $55 \times \underline{1} = 55$ 12. $24 \times \underline{1} = 24$

B. 1. $12 \times 6 \times 3 = 72 \times 3 = 216 \rightarrow$ (c)
2. $26 \times 10 = 260 \rightarrow$ (a)
3. $8 \times 100 = 800 \rightarrow$ (f)
4. $124 \times 1 = 124 \rightarrow$ (b)
5. $18 \times 15 = 270 \rightarrow$ (d)
6. $12 \times 24 \times 0 = 0 \rightarrow$ (e)

Chapter 5. Division

Recap

1. Each child gets $\underline{4}$ bananas. $\underline{12} \div \underline{3} = \underline{4}$
2. Each child gets $\underline{3}$ marbles. $\underline{15} \div \underline{5} = \underline{3}$

Exercise 5.1

1. (a) 8 lollypops between 2 children.
8 lollypops shared by 2 = 4
$8 \div 2 = 4$
Each child's share = 4 lollypops

(b) 9 balloons among 3 children.
9 balloons shared by 3 = 3
$9 \div 3 = 3$
Each child's share = 3 balloons

(c) 16 bones among 4 dogs.
16 bones shared by 4 = 4
$16 \div 4 = 4$
Each dog's share = 4 bones

(d) 9 flowers among 3 butterflies
9 flowers shared by 3 = 3
$9 \div 3 = 3$
Each butterfly's share = 3 flowers

2. (a) Total number of beads = 24
Number of strings = 3
Number of beads in each string = 8
So, $24 \div 3 = 8$

(b) Total number of beads = 18
Number of strings = 3
Number of beads in each string = 6
So, $18 \div 3 = 6$

(c) Total number of beads = 15
Number of strings = 3
Number of beads in each string = 5
So, $15 \div 3 = 5$

(d) Total number of beads = 12
Number of strings = 4
Number of beads in each string = 3
So, $12 \div 4 = 3$

Exercise 5.2

(a) 12 crayons, 3 crayons in each group.
12 in equal groups of 3 = 4 groups.
$12 \div 3 = 4$
So, 4 groups can be made.

(b) 15 marbles, 5 marbles in each group.
15 in equal groups of 5 = 3 groups.
$15 \div 5 = 3$
So, 3 groups can be made.

(c) 20 coins, 5 coins in each group.
20 in equal groups of 5 = 4 groups.
$20 \div 5 = 4$
So, 4 groups can be made.

(d) 36 matchsticks, 5 matchsticks in each group.
36 in equal groups of 9 = 4 groups.
$36 \div 9 = 4$
So, 4 groups can be made.

Exercise 5.3

1. (b) Division fact : $6 \div 2 = 3$
   (c) Division fact : $48 \div 8 = 6$
   (d) Division fact : $27 \div 9 = 3$
   (e) Division fact : $28 \div 4 = 7$
2. (a) $16 \div 4 = 4$
   $16 - 4 = 12 - 4$
   $= 8 - 4 = 4 - 4 = 0$
   (b) $20 \div 4 = 5$
   $20 - 4 = 16 - 4 = 12 - 4 = 8 - 4 = 4 - 4 = 0$
   (c) $45 \div 9 = 5$
   $45 - 9 = 36 - 9 = 27 - 9 = 18 - 9 = 9 - 9 = 0$
   (d) $54 \div 6 = 9$
   $54 - 6 = 48 - 6 = 42 - 6 = 36 - 6 = 30 - 6$
   $= 24 - 6 = 18 - 6 = 12 - 6 = 6 - 6 = 0$

Exercise 5.4

1.

S.No.	Division fact	Dividend	Divisor	Quotient
(a)	$20 \div 4 = 5$	20	4	5
(b)	$28 \div 7 = 4$	28	7	4
(c)	$24 \div 4 = 6$	24	4	6
(d)	$36 \div 9 = 4$	36	9	4
(e)	$72 \div 8 = 9$	72	8	9

2.

S.No.	Dividend	Divisor	Quotient	Division fact
(a)	66	6	11	$66 \div 6 = 11$
(b)	63	7	9	$63 \div 7 = 9$
(c)	54	6	9	$54 \div 6 = 9$
(d)	45	5	9	$45 \div 5 = 9$
(e)	64	8	8	$64 \div 8 = 8$

3. $4 = 16 \div 4 = 4$
   $5 = 15 \div 3 = 5$
   $7 = 14 \div 2 = 7$
   $3 = 12 \div 4 = 3$
   $2 = 18 \div 9 = 2$

4.

S.No.	Multiplication fact	Division facts	
(a)	$7 \times 6 = 42$	$42 \div 6 = 7$	$42 \div 7 = 6$
(b)	$4 \times 9 = 36$	$36 \div 9 = 4$	$36 \div 4 = 9$
(c)	$9 \times 5 = 45$	$45 \div 5 = 9$	$45 \div 9 = 5$
(d)	$6 \times 5 = 30$	$30 \div 5 = 6$	$30 \div 6 = 5$
(e)	$10 \times 8 = 80$	$80 \div 8 = 10$	$80 \div 10 = 8$

5.

S.No.	Division fact	Multiplication facts	
(a)	$42 \div 7 = 6$	$7 \times 6 = 42$	$6 \times 7 = 42$
(b)	$35 \div 7 = 5$	$7 \times 5 = 35$	$5 \times 7 = 35$
(c)	$18 \div 2 = 9$	$2 \times 9 = 18$	$9 \times 2 = 18$
(d)	$21 \div 3 = 7$	$3 \times 7 = 21$	$7 \times 3 = 21$
(e)	$56 \div 7 = 8$	$7 \times 8 = 56$	$8 \times 7 = 56$
(f)	$32 \div 8 = 4$	$8 \times 4 = 32$	$4 \times 8 = 32$

Exercise 5.5

1. (a) $16 \div 1 = \underline{16}$ (b) $14 \div 14 = \underline{1}$
   (c) $0 \div 9 = \underline{0}$ (d) $63 \div \underline{1} = 63$
   (e) $16 \div \underline{16} = 1$ (f) $\underline{0} \div 5 = 0$
   (g) $\underline{21} \div 1 = 21$ (h) $\underline{0} \div 13 = 0$
   (i) $0 \div 8 = \underline{0}$
2. (a) $72 \div 8 = \underline{9}$ (b) $20 \div 5 = \underline{4}$
   (c) $18 \div 6 = \underline{3}$ (d) $28 \div 7 = \underline{4}$
   (e) $18 \div 2 = \underline{9}$ (f) $50 \div 5 = \underline{10}$
   (g) $63 \div 9 = \underline{7}$ (h) $24 \div 6 = \underline{4}$
   (i) $36 \div 6 = \underline{6}$ (j) $32 \div 4 = \underline{8}$
   (k) $49 \div 7 = \underline{7}$ (l) $25 \div 5 = \underline{5}$
3. (a) We have _____ $\div 6 = 10$
   Dividend = $10 \times 6 = 60$
   So, $60 \div 6 = 10$
   (b) We have _____ $\div 3 = 7$
   Dividend = $7 \times 3 = 21$
   So, $21 \div 3 = 7$
   (c) We have _____ $\div 9 = 9$
   Dividend = $9 \times 9 = 81$
   So, $81 \div 9 = 9$

(d) We have _____ ÷ 4 = 11
Dividend = 11 × 4 = 44
So, 44 ÷ 4 = 11

(e) We have _____ ÷ 4 = 12
Dividend = 12 × 4 = 48
So, 48 ÷ 4 = 12

(f) We have _____ ÷ 7 = 10
Dividend = 10 × 7 = 70
So, 70 ÷ 7 = 10

(g) We have _____ ÷ 3 = 15
Dividend = 15 × 3 = 45
So, 45 ÷ 3 = 15

(h) We have _____ ÷ 9 = 8
Dividend = 8 × 9 = 72
So, 72 ÷ 9 = 8

(i) We have _____ ÷ 7 = 6
Dividend = 6 × 7 = 42
So, 42 ÷ 7 = 6

Exercise 5.6

1. (a) Q = 8, R = 0 (b) Q = 7, R = 0
   (c) Q = 7, R = 0 (d) Q = 38, R = 0
   (e) Q = 17, R = 0 (f) Q = 32, R = 0
   (g) Q = 11, R = 0 (h) Q = 13, R = 0
   (i) Q = 18, R = 0 (j) Q = 15, R = 0
2. Do it yourself.

Exercise 5.7

2. (a) Verification
   Dividend = Quotient × Divisor + Remainder
   465 = 93 × 5 + 0
   465 = 465 + 0
   465 = 465
   Thus, the division is correct.

   (b) Verification
   Dividend = Quotient × Divisor + Remainder
   730 = 146 × 5 + 0
   730 = 730 + 0
   730 = 730
   Thus, the division is correct.

(c) Verification
Dividend = Quotient × Divisor + Remainder
483 = 161 × 3 + 0
483 = 483 + 0
483 = 483
Thus, the division is correct.

(d) Verification
Dividend = Quotient × Divisor + Remainder
693 = 77 × 9 + 0
693 = 693 + 0
693 = 693
Thus, the division is correct.

(e) Verification
Dividend = Quotient × Divisor + Remainder
504 = 125 × 4 + 4
504 = 500 + 4
504 = 504
Thus, the division is correct.

(f) Verification
Dividend = Quotient × Divisor + Remainder
704 = 88 × 8 + 0
704 = 704 + 0
704 = 704
Thus, the division is correct.

(g) Verification
Dividend = Quotient × Divisor + Remainder
259 = 37 × 7 + 0
259 = 259 + 0
259 = 259
Thus, the division is correct.

(h) Verification
Dividend = Quotient × Divisor + Remainder
477 = 53 × 9 + 0
477 = 477 + 0
477 = 477
Thus, the division is correct.

(i) Verification
Dividend = Quotient × Divisor + Remainder
603 = 201 × 3 + 0
603 = 603 + 0
603 = 603
Thus, the division is correct.

(j) Verification

Dividend = Quotient × Divisor + Remainder
586 = 293 × 2 + 0
586 = 586 + 0
586 = 586

Thus, the division is correct.

(k) Verification

Dividend = Quotient × Divisor + Remainder
665 = 95 × 7 + 0
665 = 665 + 0
665 = 665

Thus, the division is correct.

(l) Verification

Dividend = Quotient × Divisor + Remainder
384 = 48 × 8 + 0
384 = 384 + 0
384 = 384

Thus, the division is correct.

Exercise 5.8

(a) 4364 ÷ 4 = 1091
(b) 5640 ÷ 5 = 1128
(c) 3621 ÷ 3 = 1207
(d) 6246 ÷ 6 = 1041
(e) 2415 ÷ 5 = 483
(f) 2568 ÷ 8 = 321
(g) 9025 ÷ 5 = 1805
(h) 3846 ÷ 6 = 641
(i) 1246 ÷ 7 = 178
(j) 5450 ÷ 5 = 1090
(k) 5816 ÷ 2 = 2908
(l) 8025 ÷ 5 = 1605

Exercise 5.9

1. (a) Q = 6, R = 2
   (b) Q = 7, R = 1
   (c) Q = 4, R = 3
   (d) Q = 7, R = 3
   (e) Q = 21, R = 1
   (f) Q = 15, R = 4
   (g) Q = 12, R = 0
   (h) Q = 15, R = 1
2. (a) 29 ÷ 5 = Q = 5, R = 4
   (b) 27 ÷ 8 = Q = 3, R = 3
   (c) 46 ÷ 3 = Q = 15, R = 1
   (d) 97 ÷ 2 = Q = 48, R = 1
   (e) 84 ÷ 5 = Q = 16, R = 4
   (f) 46 ÷ 4 = Q = 11, R = 2
   (g) 84 ÷ 8 = Q = 10, R = 4
   (h) 65 ÷ 6 = Q = 10, R = 5
   (i) 155 ÷ 7 = Q = 22, R = 1
   (j) 93 ÷ 9 = Q = 10, R = 3
   (k) 30 ÷ 4 = Q = 7, R = 2
   (l) 95 ÷ 3 = Q = 31, R = 2

Exercise 5.10

(a) Q = 76, R = 2
(b) Q = 86, R = 0
(c) Q = 100, R = 4
(d) Q = 253, R = 1
(e) Q = 211, R = 2
(f) Q = 24, R = 4
(g) Q = 35, R = 0
(h) Q = 120, R = 2

Exercise 5.11

1. (a) Q = 1913, R = 0
   (b) Q = 1374, R = 4
   (c) Q = 1892, R = 3
   (d) Q = 1506, R = 3
2. (a) 4203 ÷ 7
   Q = 600, R = 3
   (b) 8459 ÷ 8
   Q = 1057, R = 3
   (c) 9774 ÷ 9
   Q = 1086, R = 0
   (d) 8924 ÷ 9
   Q = 991, R = 5
   (e) 5829 ÷ 2
   Q = 2914, R = 1
   (f) 2474 ÷ 3
   Q = 824, R = 2
   (g) 6936 ÷ 5
   Q = 1387, R = 1
   (h) 7250 ÷ 4
   Q = 1812, R = 2

Exercise 5.12

S.No.	Division	Quotient	Remainder
(a)	45 ÷ 10	4	5
(b)	90 ÷ 10	9	0
(c)	134 ÷ 10	13	4
(d)	260 ÷ 10	26	0
(e)	400 ÷ 10	40	0
(f)	3973 ÷ 10	397	3
(g)	4850 ÷ 10	485	0
(h)	8400 ÷ 10	840	0

Exercise 5.13

1. (a) Total number of apples = 450
   Number of apples in a basket = 9
   So number of baskets required
   = 450 ÷ 9 = 50
   Thus, 50 baskets can be packed with 450 apples.

(b) Number of chocolates = 72
Number of children = 8
Number of chocolates each child get
= 72 ÷ 8 = 9
Thus, each child get 9 chocolates.

(c) Number of balls = 48
Number of boxes = 6
Number of balls in each box = 48 ÷ 6 = 8
Thus, there will be 8 balls in each box.

(d) Number of books = 4676
Number of shelves = 8
Number of books in each shelf
= 4676 ÷ 8
= 584 + 4 books left
Thus, 584 books were arranged in each shelt.4 books will be left over.

(e) The cost of 8 *sarees* = ₹1624
The cost of 1 *saree* = ₹1624 ÷ 8 = ₹203
Thus, each *saree* cost = ₹203

(f) Given number = 9648
Number of 6's in the given number
= 9648 ÷ 6 = 1608
Thus, there are 1608 6's in 9648.

(g) The product of two numbers = 464
One number × Second number = 464
8 × Second number = 464
Second number = 464 ÷ 8 = 58
Thus, the second number = 58.

(h) Number of prizes = 280
Number of students = 8
Number of prizes each student received
= 280 ÷ 8 = 35
Thus, each student receives 35 prizes.

(i) Number of stamps = 422
Number of albums = 3
Number of stamps each album has
= 422 ÷ 3
= 140 + 2 stamps left over.
Thus, Shyam pastes 140 stamps in each album and he has 2 stamps left over.

2. Do it yourself.

Exercise 5.14

(a) Number of girls in a class = 16
Number of boys in a class = 16 + 8 = 24
The operation used is [+].

(b) Number of stamps Rakhi has = 142
Number of stamps Suraj has = 74
Number of stamps they have in all
= 142 + 74 = 216
The operation used is [+].

(c) Total number of days in a leap year = 366
Number of school days in a leap year = 180
Number of not school days in a leap year
= 366 – 180 = 186
The operation used is [–].

(d) The greatest 4-digit number = 9999
The given number = 7548
So, the required number = 9999 – 7548 = 2451
The operation used is [–].

(e) Amount spent as pocket money = ₹ 45
Number of days in a week = 7
Amount spent as pocket money in a week
= ₹ 45 × 7 = ₹ 315
The operation used is [×].

(f) Number of apples sold in a day = 175
Number of days in January = 31
Number of apples sold in 31 days
= 175 × 31 = 5425
The operation used is [×].

(g) Given number of minutes = 240
Number of minutes in a hour = 60
Number of hours made = 240 ÷ 60 = 4
The operation used is [÷]

(h) Half a dozen eggs = 6
The cost of 6 eggs = ₹ 48
The cost of 1 egg = ₹ 48 ÷ 6 = ₹ 8
The operation used is [÷]

Revision Exercise

1. (a) 8 ÷ 2 = 4 (b) 10 ÷ 2 = 5
2. (a) 16 ÷ 8 = 2 ⇒ 2 × 8 = 16
(b) 24 ÷ 4 = 6 ⇒ 6 × 4 = 24
(c) 45 ÷ 5 = 9 ⇒ 9 × 5 = 45
(d) 64 ÷ 8 = 8 ⇒ 8 × 8 = 64

3.

S. No.	Divide	Q	R	Q × Divisor + R = Dividend?	Yes/No (✓)/(✗)
(a)	26 ÷ 5	5	1	5 × 5 + 1 = 26	✓
(b)	28 ÷ 8	3	4	3 × 8 + 4 = 8	✓
(c)	63 ÷ 5	12	3	12 × 5 + 3 = 63	✓
(d)	86 ÷ 3	28	2	28 × 3 + 2 = 86	✓
(e)	145 ÷ 6	24	1	24 × 6 + 1 = 85	✗
(f)	384 ÷ 9	42	6	42 × 9 + 6 = 384	✓
(g)	545 ÷ 7	77	6	77 × 7 + 6 = 545	✓

4. (a) Verification
Dividend = Quotient × Divisor + Remainder
784 = 112 × 7 + 0
784 = 784 + 0
784 = 784
Thus, the division is correct.

(b) Verification
Dividend = Quotient × Divisor + Remainder
648 = 81 × 8 + 0
648 = 648 + 0
648 = 648
Thus, the division is correct.

(c) Verification
Dividend = Quotient × Divisor + Remainder
564 = 141 × 4 + 0
564 = 564 + 0
564 = 564
Thus, the division is correct.

(d) Verification
Dividend = Quotient × Divisor + Remainder
189 = 21 × 9 + 0
189 = 189 + 0
189 = 189
Thus, the division is correct.

5. (a) Q = 114, R = 2 (b) Q = 196, R = 4
(c) Q = 127, R = 4 (d) Q = 60, R = 4

6. (a) Number of apples = 72
Number of boxes = 6
Number of apples in each box = 72 ÷ 6 = 12
Thus, there are 12 apples in each box.

(b) Number of books = 4698
Number of books in each shelf = 9
Number of shelves required
= 4698 ÷ 9 = 522
Thus, 522 shelves will be required.

(c) Number of marbles distributed = 164
Number of children = 4
Number of marbles each child gets
= 164 ÷ 4 = 41
Thus, each child gets 41 marbles.

(d) The distance covered in 8 hours = 336 km
The distance covered in 1 hour
= 336 km ÷ 8 = 42
Thus, the car covers 42 km in 1 hour.

Case-based Questions

1. Number of lollipops available = 72
Number of friends = 8
Number of lollipops got by each friend
= 72 ÷ 8 = 9
Thus, (c) is the correct answer.

2. Number of lollipops available = 72
Number of lollipops in a pack = 3
Number of lollipops in a packs to be made
= 72 ÷ 3 = 24
Thus, (c) is the correct answer.

3. Number of lollipops available = 72
Number of friends = 6
Number of lollipops each friends get
= 72 ÷ 6 = 12
Thus, (a) is the correct answer.

4. 72 ÷ 24 = 3 gives 3 × 24 = 72
and 24 × 3 = 72.
Thus, (c) is the correct answer.

5. 72 ÷ 1 = 72
Thus, (b) is the correct answer.

Mental Math

A. 1. 724 when divided by 9 leaves a remainder 4.
2. If 458 ÷ 10, the quotient is 45 and the remainder is 8.
3. The number of 5's in 55 is 11.
4. Remainder is the number remaining.

5. If $36 \div 4 = 9$, then 4 is subtracted 9 times from 36 to get 0 as the remainder.

B. 1. $195 \div 5$ given Q = 39, R = 0.

2. $248 \div 8$ given Q = 31, R = 0.

3. $363 \div 4$ given Q = 90, R = 3.

4. $525 \div 10$ given Q = 52, R = 5.

5. $940 \div 6$ given Q = 156, R = 4.

Thus, 1.–(c), 2.–(a), 3.–(b), 4.–(e), 5.–(d)

C. 1. If we divide an even number by 2, we get the remainder as 0.

So, the given statement is true.

2. If we divide an odd number by 2, we get the remainder as 1.

So, the given statement is true.

3. Division of a number having 0 ones by 10 gives remainder 1.

So, the given statement is false.

4. If we divide a number having 8 ones by 10, we get the remainder as 8.

So, the given statement is true.

5. The remainder must be smaller than the divisor.

So, the given statement is true.

D. 1. Number years in a decade = 10

So the number of decades made with 75 years = 7 decades, 5 years

Thus, (d) is the correct answer.

2. $570 \div 10 = 57$

Thus, (a) is the correct answer.

3. The cost of 5 ice creams = ₹85

The cost of 1 ice creams = ₹85 ÷ 5 = ₹17

Thus, (b) is the correct answer.

Test Your Knowledge–2
(Chapters 1 – 5)

1. (a)
$$\begin{array}{r} 273 \\ \times\ \ 4 \\ \hline 1092 \end{array}$$

(b)
$$\begin{array}{r} 195 \\ \times\ \ 6 \\ \hline 1170 \end{array}$$

(c)
$$\begin{array}{r} 874 \\ \times\ \ 7 \\ \hline 6118 \end{array}$$

(d)
$$\begin{array}{r} 46 \\ \times\ 12 \\ \hline 92 \\ +\ 460 \\ \hline 552 \end{array}$$

(e)
$$\begin{array}{r} 53 \\ \times\ 16 \\ \hline 318 \\ +\ 530 \\ \hline 848 \end{array}$$

3. (a) $5 \times 7 = 35$ and $8 \times 7 = 56$
So, $5 \times 7 < 8 \times 7$

(b) $4 \times 9 = 36$ and $9 \times 3 = 27$
So, $4 \times 9 > 9 \times 3$

(c) $11 \times 5 = 55$ and $5 \times 12 = 60$
So, $11 \times 5 < 5 \times 12$

(d) $16 \times 4 = 64$ and $15 \times 3 = 45$
So, $16 \times 4 > 15 \times 3$

(e) $44 \times 3 = 132$ and $3 \times 54 = 162$
So, $44 \times 3 < 3 \times 54$

(f) $26 \times 7 = 182$ and $38 \times 4 = 152$
So, $26 \times 7 > 38 \times 4$

(g) $72 \div 9 = 8$ and $64 \div 8 = 8$
So, $72 \div 9 = 64 \div 8$

(h) $36 \div 9 = 4$ and $36 \div 4 = 9$
So, $36 \div 9 < 36 \div 4$

(i) $50 \div 5 = 10$ and $40 \div 8 = 5$
So, $50 \div 5 > 40 \div 8$

4.

S.No.	Division statement	Q	R	Is Q × Divisor + R = Dividend
(a)	$27 \div 5$	5	2	$5 \times 5 + 2 = 27$
(b)	$38 \div 6$	6	2	$6 \times 6 + 2 = 38$
(c)	$45 \div 9$	5	0	$5 \times 9 + 0 = 45$
(d)	$20 \div 6$	3	2	$3 \times 6 + 2 = 20$
(e)	$96 \div 9$	10	6	$10 \times 9 + 6 = 96$

5. (a)
$$\begin{array}{r} 1004 \\ \times\ \ 6 \\ \hline 6024 \end{array}$$

(b)
$$\begin{array}{r} 363 \\ \times\ 11 \\ \hline 363 \\ +\ 3630 \\ \hline 3993 \end{array}$$

(c) $8\overline{)964}\ 120$

8
16
16
04

(d) $7\overline{)765}\ 109$

7
065
63
02

6. (a) Number of friends = 12
Number of toys each has = 9

Total number of toys = 12 × 9 = 108
Thus, the total number of toy cars Ranjana's friends has is 108.

(b) Number of water glasses drunk = 8
Number of days in October = 31
So, the number of water glasses drunk
= 31 × 8 = 243
Thus, the man drinks 243 glasses of water in the month of October.

(c) Number of cars parked = 550
The parking charge of each car = ₹15
The total collection = ₹(550 × 15) = ₹8255
Thus, ₹8255 will be the total collection of the day.

(d) Total number of students = 60
Number of students each car can carry = 15
Number of cars required = 60 ÷ 15 = 4
Thus, 4 cars will be required.

(e) Total number of books available = 873
Number of racks = 9
Number of books available in each rack
= 873 ÷ 9 = 97
Thus, 97 books will there in each rack.

(f) Total number of TV cartons = 462
Number of trucks available = 6
Number of TV cartons to be loaded in each truck = 462 ÷ 6 = 77
Thus, 77 cartons were loaded on each truck.

Model Test Paper–1

(Chapters 1 – 5)

1. (a)

Th	H	T	O
1	3	2	4

(b)

Th	H	T	O
4	0	0	1

(c)

Th	H	T	O
5	2	3	4

2. (a) 1546 1547 <u>1547</u> <u>1549</u> 1550 <u>1551</u> <u>1552</u>
(b) 2410 2420 <u>2430</u> 2440 <u>2450</u> <u>2460</u> 2470
(c) 9671 <u>9571</u> 9471 <u>9371</u> 9271 <u>9171</u> 9071
(d) 2112 2162 <u>2212</u> <u>2262</u> <u>2312</u> <u>2362</u> <u>2412</u>

3. (a) 5443 > 5434 (b) 8075 < 8175
(c) 1733 < 7133 (d) 4000 + 5 = 4005
(e) 2735 > 2730 (f) 4031 > 3031

4. (a) 2764 3050 4520 8952
(b) 1724 3896 4552 7245

5. (a) 6648 5694 4927 1028
(b) 4316 3856 3725 1431

6. (a) 345 → 350 (b) 1409 → 1410
(c) 2734 → 2730

7. (a) 26 is written as XXVI as a Roman numeral.
(b) 17 is written as XVII as a Roman numeral.
(c) XIX represents 19.
(d) XIV represents 14.
(e) XX + XXI = 20 + 21 = 41
(f) XVIII – XIII = 18 – 13 = 5

8.

S.No.	Digits	Greatest number	Smallest number
(a)	3, 7, 8, 0	8730	3078
(b)	1, 0, 2, 9	9210	1029
(c)	7, 3, 6, 1	7631	1367
(d)	4, 9, 5, 3	9543	3459

9. (a)
$$\begin{array}{r} 4326 \\ +\ 2728 \\ \hline 1324 \\ \hline 8378 \end{array}$$
(b)
$$\begin{array}{r} 6275 \\ +\ 489 \\ \hline 27 \\ \hline 6791 \end{array}$$
(c)
$$\begin{array}{r} 2341 \\ +\ 1245 \\ \hline 245 \\ \hline 3831 \end{array}$$

10. (a)
$$\begin{array}{r} 8496 \\ -\ 2796 \\ \hline 5700 \end{array}$$
(b)
$$\begin{array}{r} 7300 \\ -\ 1498 \\ \hline 5802 \end{array}$$
(c)
$$\begin{array}{r} 5948 \\ -\ 1438 \\ \hline 4510 \end{array}$$

11. (a)
$$\begin{array}{r} 8364 \\ +\ 1450 \\ \hline 9814 \end{array}$$
$$\begin{array}{r} 9814 \\ -\ 2489 \\ \hline 7325 \end{array}$$
(b)
$$\begin{array}{r} 7364 \\ -\ 2134 \\ \hline 5230 \end{array}$$
$$\begin{array}{r} 5230 \\ +\ 136 \\ \hline 5366 \end{array}$$
(c)
$$\begin{array}{r} 5327 \\ -\ 648 \\ \hline 4679 \end{array}$$
$$\begin{array}{r} 4679 \\ +\ 2431 \\ \hline 7110 \end{array}$$

12. (a)
$$\begin{array}{r} \text{Th H T O} \\ 4462 \\ +\ 3437 \\ \hline 7899 \end{array}$$
(b)
$$\begin{array}{r} \text{Th H T O} \\ 2689 \\ +\ 3184 \\ \hline 5873 \end{array}$$

(c)
	Th	H	T	O
+	7	0	0	0
	1	1	8	9
	5	8	1	1

(d)
	Th	H	T	O
+	5	7	3	4
	1	2	9	8
	4	4	3	6

13. (a)
×	3	4	5
			6
	2	0	7	0

(b)
×	7	3	6
		1	0
+	0	0	0
	7	3	6	0
	7	3	6	0

(c)
×	2	7	5
		1	3
+	8	2	5
	2	7	5	0
	3	5	7	5

14. (a) $8\overline{)1256}$ → 157; 8, 45, 40, 56, 56, 0

(b) $4\overline{)1848}$ → 462; 16, 24, 24, 08, 8, 0

(c) $3\overline{)9648}$ → 3219; 9, 06, 6, 04, 3, 18, 18, 0

(a)	(b)	(c)
Q = 157	Q = 462	Q = 3219
R = 0	R = 0	R = 0

15. (a) Number of runs scored by Sachin = 145
Number of runs scored by Rahul = + 55
Number of runs scored for first wicket = 200

(b) Highest score = 145
Lowest score = − 26
Difference = 119

(c) Number of runs in a century = 100
Number of runs second by Saurav = − 26
Difference = 74
Thus, 74 runs required to score by Saurav to score a century.

(d) The sum of scores of the bats man scoring fifties = 55 + 76 + 50 = 181

16. (a) Number of friends = 18
Number of dolls each has = 6
Total number of dolls haring then
= 18 × 6 = 108

(b) Number of rows in a parking = 12
Number of cars in a row = 20
Number of cars in the parking
= 12 × 20 = 240

(c) The cost of 18 T-shirts = ₹4410
The cost of 1 T-shirt = ₹4410 ÷ 18 = ₹245

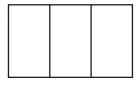
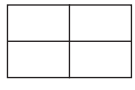
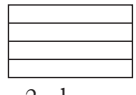
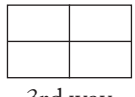
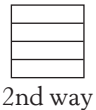
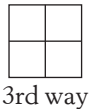
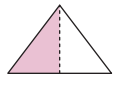
(d) Number of cups available = 859
Number of cups in a packet = 6
Number of packets made = 143
Number of cups left over = 1

Chapter 6. Fractions

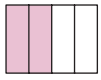
Recap

1. There are 2 □ in the shape (a).
2. There are 2 △ in the shape (b).
3. There are 8 △ in the shape (c).
4. There are 4 △ in the shape (d).

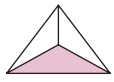
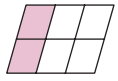
Exercise 6.1

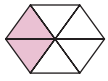
1. In the above shapes (b), (d), (e) and (g) are divided into equal parts.
2. (a)  (b) 
(c) 
3. (a)  1st way
 2nd way
 3rd way
 4th way
(b)  1st way
 2nd way
 3rd way
 4th way
4. (a)  (b)  (c) 

(d)  (e)  (f) 

(g)  (h) 

5. (a)  (b)  (c) 

(d)  (e)  (f) 

(g)  (h) 

6. (a)  (b)  (c) 

(d)  (e)  (f) 

(g)  (h) 

7. (a)  (b)  (c) 

(d)  (e)  (f) 

(g)  (h) 

8. (a) $\frac{1}{2}$ (b) $\frac{1}{3}$ (c) $\frac{3}{4}$

9. (a)–(iv), (b)–(v), (c)–(ii), (d)–(i) (e)–(iii)

Exercise 6.2

1. (a) $\frac{8}{16}$ (b) $\frac{4}{9}$ (c) $\frac{3}{5}$

2. (a) $\frac{8}{17}$ (b) $\frac{16}{25}$ (c) $\frac{4}{8}$

3. (a) $\frac{10}{20}$ (b) $\frac{7}{12}$ (c) $\frac{5}{15}$

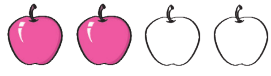
4. (a) $\frac{3}{6}$ (b) $\frac{4}{8}$ (c) $\frac{5}{12}$

5. (a) $\frac{3}{6}$ (b) $\frac{5}{8}$ (c) $\frac{13}{16}$

(d) $\frac{7}{12}$ (e) $\frac{10}{16}$ (f) $\frac{9}{15}$

Exercise 6.3

1. (b) $\frac{2}{6}$ (c) $\frac{5}{12}$ (d) $\frac{7}{8}$

2. (a) 

(b) 

(c) 

(d) 

3.

S.No.	Collection	Fraction of shaded parts	Fraction of unshaded parts
(a)		$\frac{4}{6}$	$\frac{2}{6}$
(b)		$\frac{2}{5}$	$\frac{3}{5}$
(c)		$\frac{3}{4}$	$\frac{1}{4}$
(d)		$\frac{2}{6}$	$\frac{4}{6}$

Exercise 6.4

1. (b) Total number = 12

$\frac{1}{2}$ of 12 = 12 ÷ 2 = 6

(c) Total number = 20

$\frac{1}{2}$ of 20 = 20 ÷ 2 = 10

2. (a) Total number = 12

$\frac{1}{3}$ of 12 = 12 ÷ 3 = 4

(b) Total number = 15

$\frac{1}{3}$ of 15 = 15 ÷ 3 = 5

(c) Total number = 9

$\frac{1}{3}$ of 9 = 9 ÷ 3 = 3

3. (a) Total number = 12

$\frac{1}{4}$ of 12 = 12 ÷ 4 = 3

(b) Total number = 16

$\frac{1}{4}$ of 16 = 16 ÷ 4 = 4

(c) Total number = 20

$\frac{1}{4}$ of 20 = 20 ÷ 4 = 5

4. (a) $\frac{1}{2}$ of 24 = 24 ÷ 2 = 12

(b) $\frac{1}{2}$ of 18 =18 ÷ 2 = 9

(c) $\frac{1}{3}$ of 21 = 24 ÷ 3 = 8

(d) $\frac{1}{3}$ of 21 = 21 ÷ 3 = 7

(e) $\frac{1}{4}$ of 64 = 64 ÷ 4 = 16

(f) $\frac{1}{4}$ of 32 = 32 ÷ 4 = 8

Exercise 6.5

1.

S.No.	No. of shaded parts (Numerator)	No. of parts in all (Denominator)	Fraction of shaded parts
(a)	4	9	$\frac{4}{9}$
(b)	8	15	$\frac{8}{15}$
(c)	4	11	$\frac{4}{11}$
(d)	3	7	$\frac{3}{7}$

2.

S.No.	(a)	(b)	(c)	(d)	(e)
Fraction	$\frac{4}{5}$	$\frac{7}{8}$	$\frac{2}{5}$	$\frac{7}{12}$	$\frac{3}{15}$
Numerator	4	7	2	7	3
Denominator	5	8	5	12	15

3.

S.No.	(a)	(b)	(c)	(d)	(e)
Numerator	4	7	2	6	4
Denominator	9	10	8	11	12
Fraction	$\frac{4}{9}$	$\frac{7}{10}$	$\frac{2}{8}$	$\frac{6}{11}$	$\frac{4}{12}$

Exercise 6.6

(a) The length of rope = 20 m

The length of one piece $\frac{1}{4}$ of 20 m

= 20 m ÷ 4 = 5 m

Then the length of other piece

= 20 m – 5 m = 15 m.

(b) Number of crayons Sudha had = 12

Number of crayons Neha had = 16

Number of crayons Janki had = 14

Number of crayons used by Sudha = 5

Number of crayons used by Neha = 7

Number of crayons used by Janki = 8

Fraction of crayons used by Sudha = $\frac{5}{12}$

Fraction of crayons used by Neha = $\frac{7}{16}$

Fraction of crayons used by Janki = $\frac{8}{14}$

(c) Total number of square = 6

Number of squares having circle = 3

So, required fraction = $\frac{3}{6}$

(d) Number of pineapples a fruit seller had = 12

Number of pineapples sold = 7

So, required fraction = $\frac{7}{12}$

(e) Number of benches in class = 15

Number of benches occupied = 6

Number of benches not occupied = 15 – 6 = 9

So, required fraction = $\frac{9}{15}$

(f) Number of apples in Renu's home = 16

Number of apples used by Renu

= $\frac{1}{4}$ of 16 = 16 ÷ 4 = 4

Revision Exercise

1. (a) $\frac{1}{2}$ (b) $\frac{1}{3}$ (c) $\frac{1}{4}$ (d) $\frac{2}{5}$

2. (a) $\frac{1}{4}$ of 28 = 28 ÷ 4 = 7

(b) $\frac{1}{3}$ of 27 = 27 ÷ 3 = 9

(c) $\frac{1}{4}$ of 36 = 36 ÷ 4 = 9

(d) $\frac{1}{2}$ of 38 = 38 ÷ 2 = 19

(e) $\frac{1}{3}$ of 12 = 12 ÷ 3 = 4

(f) $\frac{1}{2}$ of 88 = 88 ÷ 2 = 44

3. (a) Number of birds = 12

Number of birds on the branch

= $\frac{1}{2}$ of 12 = 12 ÷ 2 = 6

Thus, there are 6 birds on the branch of the tree.

(b) Number of frocks of same colour = 12

Number of frocks of other colour = 4

Total number of frocks

= 12 + 4 = 16

So, the required fraction = $\frac{12}{16}$

HOTS

1. $\frac{4}{9}, \frac{5}{9}$

2. (a) $\frac{25}{50}$ (b) $\frac{25}{50}$ (c) $\frac{41}{50}$

Case-based Questions

1. (c) 2. (a) 3. (b)
4. (a) 5. (c)

Mental Maths

A. 1. 2 2. 7 3. 2
4. 4 5. 9 6. 5

B. 1. True 2. False 3. True
4. False 5. False

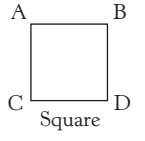
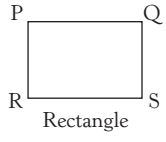
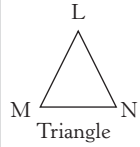
Chapter 7. Geometry

Recap

1. Five alphabet having

only straight lines	only curved lines	both straight and curved lines
A, E, F, H, I, K, L, M, N, T, V, W, X, Y, Z	C, O, Q, S, U	B, D, G, J, P, R, S

2.

Join A to B, A to C, C to D and D to B	Join P to Q, P to R, R to S, S to Q	Join L to M, M to N and N to L
 Square	 Rectangle	 Triangle

Exercise 7.1

1. (b) Line, Line PQ
(c) Line segment, Line XY
(d) Ray, Ray AB
(e) Line , Line GB
(f) Line segment, Line segment LM

2. (a) Horizontal (b) Slanting
(c) Curved (d) Vertical
(e) Slanting (f) Horizontal

3. (a) $\overline{AB}$, $\overline{BC}$, $\overline{AC}$ (b) $\overline{PQ}$, $\overline{QR}$, $\overline{RS}$, $\overline{PS}$
(c) $\overline{XA}$, $\overline{AZ}$, $\overline{YZ}$, $\overline{XY}$

4. (a) Length of AB = 2.4 cm, Length of BC = 3.6 cm, Length of CD = 2.4 cm, AD = 3.6 cm

(b) Length of PQ = 2.8 cm, Length of QR = 2.8 cm, Length of PR = 2.8 cm

(c) Length of ST = 2.4 cm, Length of TV = 2.4 cm, Length of UV = 2.4 cm, Length of SU = 2.4 cm

5. Do it yourself.

6. We can draw only one line segment with the given points A and B.

Exercise 7.2

1. (a)  (c)  (d) 

2. Figures (a) and (c) are open.

3. (a) Sides : AB, BC, CD, DE, EF, FA
Corners : A, B, C, D, E, F
Diagonals : AE, AD, FC, EB, BD

(b) Sides : AB, AE, DE, CD, BC
Corners : A, B, C, D, E
Diagonals : CE, BD, BE, AD, AC

Exercise 7.3

1.

S.No.	Object	Name of the shape	Number of sides	Number of corners
(a)		Square	4	4
(b)		Rectangle	4	4
(c)		Triangle	3	3
(d)		Circle	0	0

2. (a) This shape has 5 triangles. Names of triangles are ADF, DBE, FEC, DEF, ABC

(b) This shape has 5 squares and 4 rectangles.
Names of squares are :
ABCD, AEOH, HOGD, CGOF, BFOE
Names of rectangles are :
AHFB, HDCF, BEGC, AEGD

(c) Number of squares = 2
Names of squares are: TSYX, UWQV
Number of rectangles = 5
Names of rectangles are :
PUXT, PUYS, RYWV, YUQR

Exercise 7.4

1. (a) Plane (b) Plane
(c) Curved (d) Plane and curved
(e) Plane and curved (f) Plane
(g) Plane and curved (h) Curved

2. (a)  (b)  (c) 

3. (a)  (b)  (c) 

4. (a) 

Cylinder (b) 
Cube

(c) 
Cone (d) 

Cuboid

5.

S.No.	Name of solid	Faces	Edges	Corners
(a)	Cube	6	12	8
(b)	Cuboid	6	12	8
(c)	Cylinder	3	2	0
(d)	Cone	2	1	1
(e)	Sphere	1	0	0
(f)	Hemisphere	2	1	0

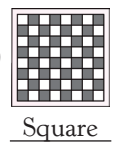
Revision Exercise

1. AE, BF, CG, DH

2. Line segments : PQ, QR, RS, ST, PT
Points : P, Q, R, S, T

3. EC, OED, EA, EB

4. (a) 6 cm (b) 4 cm
(c) 3.6 cm (d) 6.8 cm

5. (a) 
Circle (b) 
Rectangle (c) 
Square

(d) 
Rectangle (e) 
Circle (f) 
Rectangle

HOTS

(a) Any three line segments whose end-point is I, are $\overline{BI}$, $\overline{JI}$, $\overline{DI}$

(b) Any four line segments whose end-point is J, are $\overline{BJ}$, $\overline{IJ}$, $\overline{EJ}$, $\overline{DJ}$

(c) Four rays that starts from point B, are $\overrightarrow{BA}$, $\overrightarrow{BC}$, $\overrightarrow{BH}$, $\overrightarrow{BF}$

(d) Two points that lie on the ray BF, are B, J.

Case-based Questions

1. The shape of the outline of the triangle is rectangle.
   Thus, (b) is the correct answer.
2. The shape of the Ashoka Chakra is circle.
   Thus, (d) is the correct answer.
3. There are 4 rectangles in all in a triangle.
   Thus, (d) is the correct answer.
4. A rectangle has four sides and four corners. The opposite sides of a rectangle and equal. A rectangle is also a closed shape.
   Thus, (d) is the correct answer.
5. A circle does not have any corners.
   Thus, (a) is the correct answer.

Mental Maths

A. 1. All the sides of a square are equal.
2. The opposite sides of a rectangle are equal.
3. A triangle has 3 sides and 3 corners.
4. All the faces of a cube are the same in shape and size.
5. The opposite faces of a cuboid are same.
6. A cylinder has 2 plane faces and 2 edges.
7. A cone has one plane face and one curved face.
8. A cone has one vertex.
9. The figure shown here is a combination of square, rectangle and triangle.

10. A sphere has no vertex, edge or flat surface.

B. 1. Only opposite faces of a cuboid are equal.
   Thus, the given statement is false.
2. A hemisphere has 1 curved and 1 flat face.
   Thus, the given statement is true.
3. A cube has 12 edges.
   Thus, the given statement is false.
4. Only one line segment can be drawn through two given points.
   Thus, the given statement is false.
5. Three line segments can be drawn through one given point.
   Thus, the given statement is false.

C. 1. A cube has 12 edges.
   Thus, (c) is the correct answer.
2. A cube has 6 faces.
   Thus, (a) is the correct answer.
3. Every face of a cube is a square.
   Thus, (c) is the correct answer.
4. A line segment has a fixed length.
   Thus, (c) is the correct answer.
5. If we place a die on a paper and run a pencil along its one face, we get a square.
   Thus, (b) is the correct answer.
6. When we trace the flat surface of a cone, we get a circle.
   Thus, (d) is the correct answer.
7. A rectangle has 2 diagonals.
   Thus, (b) is the correct answer.

Chapter 8. Patterns

Recap

(a)–(iii) (b)–(iv) (c)–(v)
(d)–(ii) (e)–(i)

Exercise 8.1

1. (a)  (b)  (c) 
   (d)  (e) 
2. (a)  (b)  (c) 
   (d)  (e)  (f) 
3. (a) 2, 5, 7, 10, 12, 15, 17, 20

(b) A, AA, AAA, AAAA, AAAAA, AAAAAA, AAAAAAA, AAAAAAAA

(c) 2A4, 2B4, 2C4, 2D4, 2E4, 2F4, 2G4, 2H4

(d) aab, aab, aab, aab, aab, aab, aab, aab

(e) AbC, DeF, GhI, JkL, MnO, PqR, StU, VwX

(f) 7, 8, 10, 13, 17, 22, 28, 35

(g) 1, 2, 4, 8, 16, 32, 64, 128

(h) 144, 140, 136, 132, 128, 124, 120, 116

(i) 5, 10, 15, 20, 25, 30, 35, 40

(j) 10, 60, 110, 160, 210, 260, 310, 360

(k) 0, 1, 1, 2, 3, 5, 8, 13

Exercise 8.2

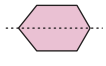
1. (d) 

Only (d) shows a filing pattern.

2. Do it yourself.

Exercise 8.3

1. (a)  (b)  (c) 

(d)  (f)  (h) 

Shape (e) and (g) are not symmetrical.

2. (b)  (c)  (d) 

(e)  (f) 

Figures (a), (g) and (h) are not symmetrical.

3. (a)  (b)  (c) 

Exercise 8.4

(a) Side view (b) Side view (c) Top view

(d) Top view (e) Top view (f) Front view

Revision Exercise

1. (a)  (b)  (c) 

(d)  (e) 

2. (a) 16, 20, 24, 28, 32, 36, 40

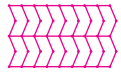
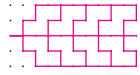
(b) 15, 25, 35, 45, 55, 65, 75

(c) 50, 42, 34, 26, 18, 10, 2

(d) 5AB, 10BC, 15CD, 20DE, 25EF, 30FG

(e) ABB, BBB, CBB, DBB, EBB, FBB

(f) ababc, ababc, ababc, ababc, ababc

3. (a)  (b) 

4. (a)  (b) 

(c)  (d) 

5. (a) (iii) (b) (iii) (c) (iii)

HOTS

2. (a) A square has 4 lines of symmetry.
(b) A rectangle has 2 lines of symmetry.
(c) A circle has infinitely many lines of symmetry.

Case Based Questions

1. The name of animal having the pattern (a) is zebra.

Thus, (c) is the correct answer.

2. Tortoise can be recognised by looking at the pattern (d).

Thus, (b) is the correct answer.

3. By looking at the pattern (e), we find that it is a crocodile.

Thus, (b) is the correct answer.

4. The giraffe has pattern (c).
Thus, (c) is the correct answer.

5. Peacock can be recognised by looking at the pattern (f).

Thus, (d) is the correct answer.

Mental Maths

1. The letter N does not have any line of symmetry.

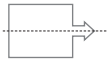
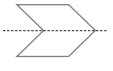
Thus, (c) is the correct answer.

2. A shape repeats after four steps. Thus, (d) is the correct answer.

3. 24, 31, 38, 45, 52, 59, 66
Thus, (b) is the correct answer.

4. 23, 30, 36, 41, 45, 48
Thus, (a) is the correct answer.

Test your knowledge–3 (Chapters 6-8)

1. (a) $\frac{1}{5}$ (b) $\frac{6}{7}$ (c) $\frac{3}{4}$
2. (a) $\frac{1}{2}$ (b) $\frac{2}{8}$ (c) $\frac{4}{7}$
3. (a) $\frac{1}{6}$ of stars = 12 ÷ 6 = 2 stars
   (b) $\frac{1}{2}$ of fish = 10 ÷ 2 = 5 fish
   (c) $\frac{1}{4}$ of butterflies = 8 ÷ 4 = 2 butterflies
4. (a) Numerator = 3, Denominator = 8
   Fraction = $\frac{3}{8}$
   (b) Numerator = 5, Denominator = 9
   Fraction = $\frac{5}{9}$
5. (a) 5 (b) 8 (c) 6
6. (a) Line, $\overleftrightarrow{AB}$ (b) Ray, $\overrightarrow{LM}$
   (c) Line segment, $\overline{PQ}$
7. (b) Shapes (a) and (c) are not symmetrical.
8. (a)  (b)  (c) 
9. Do yourself
10. (a) AA, BB, CC, DD, EE, FF, GG, HH
    (b) 2A, 3B, 4C, 5D, 6E, 7F, 8G,9H
    (c) 1A5E, 2B6F, 3C7G, 4D8H, 5E9I, 6F10J, 7G11K, 8H12L
11. (a) Number of rectangles = 8
    (b) Number of squares = 3
    (c) Number of circles = 3
    (d) Number of triangles = 3

Chapter 9. Measurements

Recap

(a) Cubit (b) Cubit (c) Cubit
(d) Handspan (e) Armspan (f) Palm
(g) Cubit (h) Pace (i) Handspan

Exercise 9.1

1. (a) cm (b) m
   (c) cm (d) km
2. (a) The length of a nail (cm/m/km)
   (b) The height of your teacher (cm/m/km)
   (c) The length of a swimming pool (cm/m/km)
   (d) The length of a needle (cm/m/km)
   (e) The length of a river (cm/m/km)
3. (a) 9 cm (b) 8 cm
   (c) 6 cm (d) 3 cm

Exercise 9.2

1. (a) 7 m = 7 × 100 = 700 cm
   (b) 8 m = 8 × 100 = 800 cm
   (c) 32 m = 32 × 100 = 3200 cm
   (d) 55 m = 55 × 100 = 5500 cm
   (e) 76 m = 76 × 100 = 7600 cm
   (f) 10 m = 10 × 100 = 1000 cm
   (g) 27 m = 27 × 100 = 2700 cm
   (h) 88 m = 88 × 100 = 8800 cm
2. (a) 4 m 20 cm = 4 m + 20 cm
   = 4 × 100 cm + 20 cm
   = 400 cm + 20cm
   = 420 cm
   (b) 8 m 27cm = 8 m + 27 cm
   = 8 × 100 cm + 27cm
   = 800 cm + 27 cm
   = 827 cm
   (c) 24 m 5 cm = 24 m + 5 cm
   = 24 × 100 cm + 5 cm
   = 2400 cm + 5 cm
   = 2405 cm
   (d) 71 m 29 cm = 71 m + 29 cm
   = 71 × 100 cm + 29 cm
   = 7100 cm + 29 cm
   = 7129 cm
   (e) 45 m 21 cm = 45 m + 21 cm
   = 45 × 100 cm + 21 cm
   = 4500 cm + 21 cm
   = 4521 cm
   (f) 66 m 40 cm = 66 m + 40 cm
   = 66 × 100 cm + 40 cm
   = 6600 cm + 40 cm
   = 6640 cm
   (g) 80 m 16 cm = 80 m + 16 cm
   = 80 × 100 cm + 16 cm
   = 8000 cm + 16 cm
   = 8016 cm

(h) 92 m 1 cm = 92 m + 1 cm
= 92 × 100 cm + 1 cm
= 9200 cm + 1 cm
= 9201 cm

3. (a) 400 cm = 400 ÷ 100 = 4 m

(b) 800 cm = 800 ÷ 100 = 8 m

(c) 1200 cm = 1200 ÷ 100 = 12 m

(d) 2300 cm = 2300 ÷ 100 = 23 m

(e) 8200 cm = 8200 ÷ 100 = 82 m

(f) 5400 cm = 5400 ÷ 100 = 54 m

(g) 7700 cm = 7700 ÷ 100 = 77 m

(h) 1900 cm = 1900 ÷ 100 = 19 m

4. (a) 322 cm = 300 + 22 cm
= 300 ÷ 100 m + 22 cm
= 3 m 22 cm

(b) 427 cm = 400 cm + 27 cm
= 400 ÷ 100 m + 27 cm
= 4 m 27 cm

(c) 1325 cm = 1300 cm + 25 cm
= 1300 ÷ 100 m + 25 cm
= 13 m 25 cm

(d) 2620 cm = 2600 cm + 20 cm
= 2600 ÷ 100 m + 20 cm
= 26 m 20 cm

(e) 1940 cm = 1900 cm + 40 cm
= 1900 ÷ 100 m + 40 cm
= 19 m 40 cm

(f) 7201 cm = 7200 cm + 1 cm
= 7200 ÷ 100 m + 1 cm
= 72 m 1 cm

(g) 3842 cm = 3800 cm + 42 cm
= 3800 ÷ 100 m + 42 cm
= 38 m 42 cm

(h) 2754 cm = 2700 cm + 54 cm
= 2700 ÷ 100 m + 54 cm
= 27 m 54 cm

5. (a) 8 km = 8 × 1000 = 8000 m

(b) 14 km = 14 × 1000 = 14000 m

(c) 42 km = 42 × 1000 = 42000 m

(d) 27 km = 27 × 1000 = 27000 m

(e) 24 km = 24 × 1000 = 24000 m

(f) 72 km = 72 × 1000 = 72000 m

(g) 26 km = 26 × 1000 = 26000 m

(h) 82 km = 82 × 1000 = 82000 m

6. (a) 6 km 260 m = 6 km + 260 m
= 6 × 1000 m + 260 m
= 6260 m

(b) 7 km 920 m = 7 km + 920 m
= 7 × 1000 m + 920 m
= 7920 m

(c) 11 km 42 m = 11 km + 42 m
= 11 × 1000 m + 42 m
= 11042 m

(d) 5 km 942 m = 5 km + 942 m
= 5 × 1000 m + 942 m
= 5942 m

(e) 22 km 72 m = 22 km + 72 m
= 22 × 1000 m + 72 m
= 22072 m

(f) 21 km 614 m = 21 km + 614 m
= 21 × 1000 m + 614 m
= 21614 m

7. (a) 7000 m = 7000 ÷ 1000 = 7 km

(b) 8000 m = 8000 ÷ 1000 = 8 km

(c) 11000 m = 11000 ÷ 1000 = 11 km

(d) 21000 m = 21000 ÷ 1000 = 21 km

8. (a) 6482 m = 6000 m + 482 m
= 6000 ÷ 1000 km + 482 m
= 6 km 482 m

(b) 8922 m = 8000 m + 922 m
= 8000 ÷ 1000 km + 922 m
= 8 km 922 m

(c) 2400 m = 2000 m + 400 m
= 2000 ÷ 1000 km + 400 m
= 2 km 400 m

(d) 7364 m = 7000 m + 364 m
= 7000 ÷ 1000 km + 364 m
= 7 km 364 m

Exercise 9.3

1. (a)

	m	cm
	12	27
+	28	32
	40	59

(b)

	m	cm
	26	73
+	21	44
	48	17

(c)

	km	m
	5	364
+	4	268
	9	632

(d)

	km	m
	7	526
+	12	042
	19	568

(e)
	m	cm
+	72	06
	26	04
	98	10

(f)
	m	cm
+	29	33
	5	92
	35	25

(g)
	km	m
+	18	402
	26	078
	44	480

(h)
	km	m
+	92	008
	11	964
	103	972

2. (a)
	m	cm
−	26	24
	14	12
	12	12

(b)
	m	cm
−	92	08
	21	72
	70	36

(c)
	m	cm
−	27	95
	14	08
	13	87

(d)
	m	cm
−	44	00
	18	26
	25	74

(e)
	km	m
−	21	373
	12	142
	9	230

(f)
	km	m
−	55	004
	16	178
	38	826

(g)
	km	m
−	93	248
	17	009
	76	239

(h)
	km	m
−	28	000
	21	345
	6	655

3. (a) Length of red ribbon = 8 m 20 cm

Length of green ribbon = 7 m 35 cm

Total length of both ribbons = 15 m 55 cm

	m	cm
+	8	20
	7	35
	15	55

(b) Distance of railway station from Raju's house = 8 km 475 m

Distance of airport from Raju's house = 26 km 378 m

Difference in both distances = 17 km 903 m

	km	m
−	26	378
	8	475
	17	903

(c) Distance of city A from city P = 42 km 272 m

Distance of city B from city A = 16 km 294 m

Distance of city B from city P = 58 km 566 m

	km	m
+	42	272
	16	294
	58	566

(d) Distance jogged by Reena = 72 m 26 cm

Distance jogged by Soni = 64 m 42 cm

Since 72 m 25 cm > 64 m 42 cm, Reena jogs more than Soni.

Difference in distances = 7 m 84 cm

	m	cm
−	72	26
	64	42
	7	84

Exercise 9.4

1. (a) g (b) kg (c) kg
(d) kg (e) g

2. (a) 1 kg = 500 g + 200 g + 100 g + 100 g + 100 g
(b) 1 kg = 500 g + 200 g + 100 g + 100 g + 50 g + 50 g
(c) 5 kg = 2 kg + 2 kg + 500 g + 500 g
(d) 5 kg = 2 kg + 1 kg + 500 g + 500 g + 500 g + 500 g
(e) 10 kg = 5 kg + 2 kg + 5 kg + 1 kg

3. (a) 8 kg = 8000 g (b) 9 kg = 9000 g
(c) 11 kg = 11000 g (d) 44 kg = 44000 g
(e) 35 kg = 35000 g (f) 54 kg = 54000 g
(g) 96 kg = 96000 g (h) 21 kg = 21000 g

4. (a) 4 kg 250 g = 4250 g
(b) 15 kg 750 g = 15750 g
(c) 23 kg 400 g = 23400 g
(d) 32 kg 008 g = 32008 g
(e) 45 kg 60 g = 45060 g
(f) 17 kg 275 g = 17275 g
(g) 81 kg 325 g = 81325 g
(h) 26 kg 245 g = 26245 g

5. (a) 7000 g = 7 kg (b) 14000 g = 14 kg
(c) 23000 g = 23 kg (d) 17000 g = 17 kg
(e) 25000 g = 25 kg (f) 72000 g = 72 kg

6. (a) 9665 g = 9 kg 665 g (b) 4270 g = 4 kg 270 g
(c) 3742 g = 3 kg 742 g (d) 8464 g = 8 kg 464 g
(e) 5709 g = 5 kg 709 g (f) 1482 g = 1 kg 482 g

Exercise 9.5

1. (a)

	kg	g
+	26	720
	14	342
	41	062

(b)

	kg	g
+	75	735
	11	824
	87	559

(c)

	kg	g
+	24	025
	13	724
	37	749

(d)

	kg	g
+	78	006
	4	555
	82	561

(e)

	kg	g
+	27	765
	13	324
	41	089

(f)

	kg	g
+	55	320
	16	927
	72	247

(g)

	kg	g
+	18	215
	17	125
	35	340

(h)

	kg	g
+	92	327
	4	290
	96	617

2. (a)

	kg	g
−	9	215
	4	175
	5	040

(b)

	kg	g
−	18	500
	6	325
	12	175

(c)

	kg	g
−	24	775
	14	348
	10	427

(d)

	kg	g
−	95	270
	62	348
	32	922

(e)

	kg	g
−	28	640
	18	349
	10	291

(f)

	kg	g
−	24	278
	16	964
	7	314

(g)

	kg	g
−	28	148
	12	964
	15	184

(h)

	kg	g
−	80	900
	65	750
	15	150

3. (a) The weight of Reena = 27 kg 250 g
The weight of Meenu = 35 kg 48 g
Total weight of both = 62 kg 298 g

	kg	g
+	27	250
	35	48
	62	298

(b) The weight of potatoes = 18 kg 308 g
The weight of onions = 12 kg 240 g
The weight of cabbage = 4 kg 725g
The weight of tomatoes = 900 g
The total weight of vegetables = 36 kg 173 g

	kg	g
	18	308
	12	240
	4	725
+		900
	36	173

(c) The weight of pumpkin = 5 kg 488 g
The weight of watermelon = 2 kg 325 g
Since 5 kg 488 g > 2 kg 325 g pumpkin
Weights more than watermelon by 3 kg 163 g

	kg	g
	5	488
−	2	325
	3	163

(d) The weight of rice bought = 24 kg 500 g
The weight of rice used = 18 kg 200 g
The weight of rice left = 6 kg 300 g

	kg	g
	24	500
−	18	200
	6	300

Exercise 9.6

1. (a) ml (b) *l* (c) *l*
(d) *l* (e) ml (f) ml
2. (a) 1 *l* = 500 ml + 200 ml + 300 ml
(b) 1 *l* = 500 ml + 500 ml
(c) 5 *l* = 1 *l* + 2 *l* + 2 *l*
(d) 10 *l* = 2 *l* + 2 *l* + 1 *l* + 5 *l*
(e) 1 *l* = 200 ml + 200 ml + 200 ml + 200 ml + 200 ml
3. (a) 7 *l* = 7000 ml (b) 12 *l* = 12000 ml
(c) 24 *l* = 24000 ml (d) 9 *l* = 9000 ml
(e) 35 *l* = 35000 ml (f) 41 *l* = 41000 ml
(g) 54 *l* = 54000 ml (h) 83 *l* = 83000 ml
(i) 96 *l* = 96000 ml
4. (a) 6 *l* 245 ml = 6245 ml
(b) 3 *l* 950 ml = 3950 ml
(c) 12 *l* 165 ml = 12165 ml
(d) 23 *l* 454 ml = 23454 ml
(e) 32 *l* 45 ml = 32045 ml
(f) 28 *l* 75 ml = 28075 ml
(g) 35 *l* 200 ml = 35200 ml
(h) 75 *l* 309 ml = 75309 ml
(i) 26 *l* 402 ml = 26402 ml

5. (a) 2000 ml = 2 *l*
(b) 12000 ml = 12 *l*
(c) 27000 ml = 27 *l*
(d) 9000 ml = 9 *l*
(e) 21000 ml = 21 *l*
(f) 20000 ml = 20 *l*
(g) 10000 ml = 10 *l*
(h) 93000 ml = 93 *l*
(i) 35000 ml = 35 *l*

6. (a) 4500 ml = 4 *l* 500 ml
(b) 7596 ml = 7 *l* 596 ml
(c) 8426 ml = 8 *l* 426 ml
(d) 4326 ml = 4 *l* 326 ml
(e) 2135 ml = 2 *l* 135 ml
(f) 9024 ml = 9 *l* 24 ml
(g) 20405 ml = 20 *l* 405 ml
(h) 18045 ml = 18 *l* 45 ml
(i) 24300 ml = 24 *l* 300 ml

Exercise 9.7

1. (a)

	l	ml
+	23	942
	24	482
	48	424

(b)

	l	ml
+	16	082
	24	546
	40	628

(c)

	l	ml
+	26	375
	24	260
	50	635

(d)

	l	ml
+	28	426
	19	008
	47	434

(e)

	l	ml
+	35	745
	28	248
	63	993

(f)

	l	ml
+	44	846
	33	243
	78	089

(g)

	l	ml
+	25	343
	18	224
	43	567

(h)

	l	ml
+	26	465
	24	235
	50	700

2. (a)

	l	ml
−	92	340
	42	122
	50	218

(b)

	l	ml
−	46	326
	24	245
	22	081

(c)

	l	ml
−	73	649
	24	423
	49	226

(d)

	l	ml
−	146	054
	18	736
	127	318

(e)

	l	ml
−	471	908
	129	934
	341	974

(f)

	l	ml
−	543	077
	428	297
	114	780

(g)

	l	ml
−	662	082
	219	282
	442	800

(h)

	l	ml
−	745	248
	211	241
	534	007

3. (a) The quantity of milk the milkman had = 40 *l* 350 ml
The quantity of milk sold = 18 l 250 ml
The quantity of milk left = 22 l 100 ml

	l	ml
−	40	350
	18	250
	22	100

(b) The quantity of water in container = 26 *l*
The quantity of water used = 8 *l* 450 ml
The quantity of water left in container = 17 *l* 550 ml

	l	ml
−	26	000
	8	450
	17	550

(c) The quantity of oil in container = 18 *l* 750 ml
The quantity of oil in another container = 49 *l* 242 ml
Since 49 *l* 242 ml > 18 *l* 750 ml, second container has more oil than the first one by 30 *l* 492 ml.

	l	ml
−	49	242
	18	750
	30	492

(d) The quantity of milk in bucket = 12 *l* 875 ml
The quantity of water added = 2 *l* 350 ml
The quantity of mixture formed = 15 *l* 225 ml

	l	ml
+	12	875
	2	350
	15	225

Revision Exercise

1. (a) 28 m = 2800 cm
(b) 400 cm = 4 m
(c) 335 cm = 3 m 35 cm
(d) 41 kg = 41000 g
(e) 19000 g = 19 kg
(f) 3775 g = 3 kg 775 g
(g) 26 *l* = 26000 ml

(h) 7000 ml = 7 *l*

(i) 2482 ml = 2 *l* 482 ml

(j) 92 m = 9200 cm

(k) 2800 cm = 28 m

(l) 1244 cm = 12 m 44 cm

2. (a) Weight of apples = 3 kg 850 g

Weight of oranges = 2 kg 250 g

Weight of grapes = 800 g

The total weight of items bought = 6 kg 900 g

	kg	g
	3	850
	2	250
+		800
	6	900

(b) Weight of wheat flour bought = 32 kg 720 g

Weight of wheat flour used = 24 kg 785 g

Weight of wheat flour left = 7 kg 935 g

	kg	g
	32	720
–	24	785
	7	935

(c) The length of Pinki's ribbon = 12 m 28 cm

The length of Anu's ribbon = 24 m 75 cm

The length of both ribbons = 37 m 3 cm

	m	cm
	12	28
+	24	75
	37	03

(d) The length of cloth bought by Ranjana = 8 m 34 cm

The length of cloth bought by Sanjana = 16 m 10 cm

Difference in length of cloth = 7 m 76 cm

	m	cm
	16	10
–	8	34
	7	76

(e) Quantity of petrol in gallon = 25 *l* 500 ml

Quantity of petrol in drum = 72 *l* 500 ml

Total quantity of petrol in both containers = 98 *l*

	l	ml
	25	500
+	72	500
	98	000

(f) Quantity of painter purchased = 60 l 750 ml

Quantity of painter used = 40 l 500 ml

Quantity of painter left = 20 l 250 ml

	l	ml
	60	750
–	40	500
	20	250

HOTS

1. (a) 8 kg = 800 g

So, 8 kg > 800 g or 800 g < 8 kg

(b) 9000 m = 9 km

So, 9 km > 5 km or 5 km < 9 km

2. Quantity of milk in bucket = 18 l 900 ml = 18900 ml

Quantity of milk in a jug = 300 ml

Number of jugs needed = 18900 ml ÷ 300 ml = 63

Case-based Questions

1. Distance from home to school
= 400 m + 450 m = 850 m
Thus, (c) is the correct answer.
2. Bus stop is the closest to home.
Thus, (c) is the correct answer.
3. Distance from home to college
= 75 m + 75 m + 300 m + 100 m = 550 m
Thus, (c) is the correct answer.
4. Distance from home to super market
= 75 m + 75 m + 150 m

Distance from home to office
= 75 m + 400 m + 200 m = 675 m

Difference = 675 m – 150 m = 525 m

Thus, (d) is the correct answer.
5. Distance from home to Railway station
= 400 m + 100 m + 150 m = 650 m
Thus, (c) is the correct answer.

Mental Maths

A. 1. 1 km 50 m < 1060 m

2. 3 km 22 m = 3022 m

3. 3 kg 25 g < 3225 g

4. 6 kg 58 g < 6580 g

5. 4 *l* 22 ml < 4222 ml

6. 3082 ml < 3 *l* 810 ml

B. 1. 1 *l* = 1000 ml and 1000 ml – 372 ml = 628 ml
Thus, (b) is the correct answer.

2. Half a kg = 500 g
   Thus, (b) is the correct answer.
3. 4 *l* – 4000 ml and 4000 ml ÷ 500 ml = 8
   Thus, (c) is the correct answer.
4. 12 m = 1200 m and 1200 m – 50 m = 24
   Thus, (d) is the correct answer.

C. 1. (c) 2. (d)
3. (e) 4. (f)
5. (a) 6. (b)

Chapter 10. Time

Recap

1. (b) 10 : 00, 10 o'clock (c) 8 : 00, 8 o'clock
   (d) 11 : 00, 11 o'clock (f) 3 : 30, half past three
   (g) 4 : 30, half past four
2. (a)  (b) 
   (c)  (d) 

Exercise 10.1

1. (a) 8 : 10, 10 minutes past 8
   (b) 5 : 35, 25 minutes to 6
   (c) 10 : 25, 25 minutes past 10
   (d) 8 : 45, quarter to 9
   (e) 9 : 15, quarter past 9
   (f) 6 : 55, 5 minutes to 7
   (g) 6 : 00, 6 o'clock
   (h) 2 : 30, half past 2
2. (a)  (b)  (c) 
   (d)  (e)  (f) 
   (g)  (h) 

Exercise 10.2

1. (a) 7 : 30 in the morning → 7 : 00 a.m.
   (b) 11 : 05 at night → 11 : 05 p.m.
   (c) 8 : 45 in the evening → 8 : 45 p.m.
   (d) 8 : 00 of night → 8 : 00 p.m.
   (e) 1 : 30 afternoon → 1 : 30 p.m.
   (f) 2 : 30 after midnight → 2 : 30 a.m.
   (g) 4 : 15 in the evening → 4 : 15 p.m.
   (h) 12 : 20 afternoon → 12 : 20 p.m.
   (i) Half past 6 in the evening → 6 : 30 p.m.
   (j) Quarter to 7 in the morning → 6 : 45 a.m.
2. (a) evening (b) night
   (c) evening (d) morning
   (e) night (f) evening
   (g) afternoon (h) evening

Exercise 10.3

1. (a) 5 minutes (b) 3 hours
   (c) month (d) 3 years
   (e) 10 minutes
2. (a) 6 hours = 6 × 60 = 360 minutes
   (b) 8 hours = 8 × 60 = 480 minutes
   (c) 12 hours = 12 × 60 = 720 minutes
   (d) 10 hours = 10 × 60 = 600 minutes
   (e) 11 hours = 11 × 60 = 660 minutes
   (f) 16 hours = 16 × 60 = 960 minutes
   (g) 18 hours = 18 × 60 = 1080 minutes
   (h) 30 hours = 30 × 60 = 1800 minutes
   (i) 15 hours = 15 × 60 = 900 minutes
3. (a) 3 days = 3 × 24 = 72 hours
   (b) 8 days = 8 × 24 = 192 hours
   (c) 10 days = 10 × 24 = 240 hours
   (d) 6 days = 6 × 24 = 144 hours
   (e) 9 days = 9 × 24 = 216 hours
   (f) 12 days = 12 × 24 = 288 hours
   (g) 14 days = 14 × 24 = 336 hours
   (h) 16 days = 16 × 24 = 384 hours
   (i) 20 days = 20 × 24 = 480 hours

Exercise 10.4

1. (a) January is the first month of a year.
   So, the given statement is true.

(b) December is the last month of a year.
So, the given statement is true.

(c) 52 weeks = 52 × 7 = 364 days + 1= 365 days.
But a leap year has 366 days. So, the given statement is false.

(d) A month cannot have a maximum of 32 days.
So, the given statement is false.

(e) A month can have a minimum of 28 days.
So, the given statement is true.

(f) 21 + 7 = 28
If today is Wednesday, 21st June, the next Wednesday will be 28th June. On 29th June will be Thursday but not Saturday.
So, the given statement is false.

2. (a) Wednesday was the day on 1st June 2022.

(b) Saturday was the day on 18th June 2022.

(c) Thursday was the day on the last day of June in 2022.

(d) There were 30 days in June 2022.

(e) 16 + 7 = 23
So, 23rd June 2022 was the date one week after 16th June 2022.

(f) 4 + 7 + 7 = 18
So, 18th June 2022 was the date two weeks after 4th June 2022.

3. (a) February 10, 2022
10-02-2022, 10th February 2022

(b) August 16, 2005
16-08-2005, 16th August 2005

(c) 11-11-2011
November 11, 2011, 11th November 2011

(d) 11/12/2013
11-12-2013, 11th December 2013

(e) September 23, 2007
23-09-2007, 23/09/2007

4.

S.No.	Dates	Date	Month	Year
(a)	Nov. 10, 1984	10	November	1984
(b)	30-11-16	30	November	2016
(c)	02/28/2013	28	February	2013
(d)	22.04.2022	22	April	2022

Revision Exercise

1. (a) 8 : 00, 8 o'clock

(b) 10 : 05, 5 minutes past 10

(c) 4 : 15, quarter past 4

2. (a)  (b)  (c) 

3. (a) 9 : 00 morning → 9 : 00 a.m.

(b) 7 : 00 evening → 7 : 00 p.m.

(c) 8 : 00 morning → 8 : 00 a.m.

(d) 12 : 20 night → 12 : 20 a.m.

(e) 12 : 40 afternoon → 12 : 40 p.m.

(f) 2 : 30 night → 2 : 30 a.m.

4. Answers may vary.

5. (a) 25th December 2009
25-12-2009, 25/12/2009

(b) 23rd October 2010
23-10-2010, October 23, 2010

(c) 22nd June 2014
22/06/2014, June 22, 2014

(d) 24th March 2019
March 24, 2019, 24-03-2019

(e) 23rd April 2015
23.04.2015, 23/04/2015

6. (a) 8 hours → 8 × 60 = 480 minutes

(b) 12 hours → 12 × 60 = 720 minutes

(c) 16 hours → 16 × 60 = 960 minutes

(d) 14 hours → 14 × 60 = 840 minutes

7. (a) 7 days → 7 × 24 = 168 hours

(b) 180 minutes → 180 ÷ 60 = 3 hours

(c) 8 days → 8 × 24 = 192 hours

(d) 360 minutes → 360 ÷ 60 = 6 hours

8. (a) August

(b) Wednesday

(c) 31

(d) 12 -08-2022

(e) August

HOTS

1. 8 : 30 a.m. $\xrightarrow{-15 \text{ min}}$ 8 : 15 a.m.

At 8 : 15 a.m. I should leave home to make sure I reach the school at 8 : 30 a.m.

2. Starting time = 1:45 p.m.

Finishing time = 3:30 p.m.

1:45 p.m. $\xrightarrow{15 \text{ min}}$ 2:00 p.m.

$\xrightarrow{1\text{hour}}$ 3:00 p.m.

$\xrightarrow{30 \text{ min}}$ 3:30 p.m.

Duration = 15 min + 1 hour + 30 min
= 1 hour 45 minutes.

It takes 1 hour 45 minutes to read the chapter

Case-based Questions

1. 2022 – 2014 = 8
So, the age of Shruti in 2022 is 8 years.
Hence, (c) is the correct answer.
2. On Monday, Shruti 's birthday will fall in 2022.
Hence, (b) is the correct answer.
3. Age of Shruti in 2022 = 8 years
Now, 8 + 8 = 16 years.
So, Shruti will 16 years old after 8 years of 2022.
Hence, (b) is the correct answer.
4. 2014 + 12 = 2026
So, on 03/04/2026, Shruti will be twelve years old.
Hence, (d) is the correct answer.
5. On Tuesday, the registration was made.
Hence, (b) is the correct answer.

Mental Maths

A. 1. 2 hours 16 minutes
= 2 × 60 + 16 = 120 + 16 = 136 minutes
2. 4 days 8 hours
= 4 × 24 + 8 = 96 + 8 = 104 hours
3. 120 hours = 120 ÷ 24 = 5 days
4. 300 hours = 12 days and 12 hours
5. 1 year = 12 months

B. 1. 240 ÷ 60 = 4
So, there are 240 minutes in 4 hours.
Thus, the given statement is true.
2. There are 366 days in a leap year.
Thus, the given statement is true.
3. In a leap year, February has 29 days.
Thus, the given statement is false.
4. Time taken by the hour hand to finish one round of the clock = 60 minutes.
Time taken by the hour hand to finish half round of the clock = 30 minutes.
Now, 60 + 30 = 30 minutes.
Thus, the given statement is true.
5. When the minute hand is on the right hand side of the clock, we say it is minutes past the hour.
Thus, the given statement is false.

Chapter 11. Money

Recap

(a) Five (b) Two
(c) Two, one (d) One, two, one

Exercise 11.1

1. (a) ₹65.25 (b) ₹101.25
(c) ₹30.00 (d) ₹18.15
2. (a) 115 rupees and 65 paise = ₹115.65
(b) 73 rupees and 7 paise = ₹73.07
(c) 8 rupees and 75 paise = ₹8.75
(d) 75 rupees and 80 paise = ₹75.80
(e) 40 paise = ₹0.40
(f) 512 rupees = ₹512.00
3. (a) ₹ 115.40 = 115 rupees and 40 paise
(b) ₹ 65.03 = 65 rupees and 3 paise
(c) ₹ 44.93 = 44 rupees and 93 paise
(d) ₹ 0.04 = 4 paise
(e) ₹ 0.62 = 62 paise
(f) ₹ 135.45 = 135 rupees and 45 paise

Exercise 11.2

1. (a) 4 rupees = 4 × 100 = 400 p
(b) 10 rupees and 8 paise = 10 × 100 + 8 = 1008 p
(c) 60 rupees and 50 paise
= 60 × 100 + 50 = 6050 p
(d) 30 rupees and 10 paise
= 30 × 100 + 10 = 3010 p
(e) 8 rupees and 25 paise = 8 × 100 + 25 = 825 p
(f) 9 rupees = 9 × 100 = 900 p
2. (a) ₹ 15.75 = 1575 p (b) ₹ 12.00 = 1200 p
(c) ₹ 24.50 = 2450 p (d) ₹ 45.25 = 4525 p

(e) ₹ 45.00 = 4500 p (f) ₹ 99.99 = 9999 p

(g) ₹ 0.02 = 2 p (h) ₹ 0.08 = 8 p

(i) ₹ 125.28 = 12528 p

3. (a) 842 p = ₹ 8.42 (b) 2040 p = ₹ 20.40

(c) 330 p = ₹ 3.30 (d) 50 p = ₹ 0.50

(e) 15 p = ₹ 0.15 (f) 5200 p = ₹ 52.00

(g) 75 p = ₹ 0.75 (h) 1365 p = ₹ 13.65

(i) 19326 p = ₹ 193.26

Exercise 11.3

1. (a)

₹	p
16	72
+ 10	48
27	20

(b)

₹	p
135	75
+ 22	08
157	83

(c)

₹	p
72	05
+ 24	95
97	00

(d)

₹	p
26	46
+ 0	71
27	17

(e)

₹	p
0	42
0	82
+ 0	54
1	78

(f)

₹	p
96	08
24	88
+ 32	46
153	42

(g)

₹	p
45	73
23	24
+ 83	93
152	90

(h)

₹	p
27	65
82	46
+ 31	25
141	36

2. (a)

₹	p
372	40
– 122	98
249	42

(b)

₹	p
86	45
– 24	27
62	18

(c)

₹	p
110	00
– 16	95
93	05

(d)

₹	p
87	50
– 72	75
14	75

3. (a)

₹	p
132	75
× 8	
1062	00

(b)

₹	p
424	60
× 7	
2972	20

(c)

₹	p
16	85
× 5	
84	25

(d)

₹	p
20	25
× 6	
121	50

4. (a) $4\overline{)₹\,95.48}$ → 23.87

8	
15	
12	
34	
32	
28	
28	
0	

Q = ₹23.87

(b) $5\overline{)₹\,27.95}$ → 5.59

25	
29	
25	
45	
45	
0	

Q = ₹5.59

(c) $3\overline{)₹\,69.21}$ → 23.07

6	
09	
9	
021	
21	
0	

Q = ₹23.07

(d) $8\overline{)₹\,48.24}$ → 6.03

48	
0024	
24	
0	

Q = ₹6.03

Exercise 11.4

(a) The cost of a frock = ₹ 405.40

The cost of a handkerchief = +₹ 40.60

The total amount = ₹ 446.00

(b) The cost of a *saree* = ₹ 635.00

The cost of a blouse = ₹ 150.10

The cost of a hand bag = +₹ 168.30

Total cost of above items = ₹ 953.40

Amount Ragni had = ₹ 1000.00

Amount spent by her = –₹ 953.40

Amount left with her = ₹ 46.60

(c) Amount spent by Anjana = ₹ 740.50

Amount spent by Rakesh = –₹ 135.60

= ₹ 604.90

(d) Amount Sulekha had = ₹ 1000.00

Amount returned by father = –₹ 228.50

The cost of shirt = ₹ 771.50

(e) Amount Contributed = ₹150.00 × 8 = ₹1200.00
So, ₹1200 was collected by the children in all.

(f) The cost of 1 dozen of bananas = ₹60
The cost of 6 dozen of bananas = ₹60 × 6 = ₹360.00
Thus, Shanti paid ₹360 to the fruit seller.

(g) The cost of 9 ice creams = ₹225
The cost of 1 ice cream = ₹225 ÷ 9 = ₹25

(h) The cost of 4 sweaters = ₹984.64
The cost of 1 sweater = ₹984.64 ÷ 4 = ₹246.16

Exercise 11.5

(a)

Green Vegetable Store				
S.No.	Item	Quantity	Rate	Amount
(a)	Cabbage	1 kg	₹ 22/kg	₹22.00
(b)	Tomatoes	$1\frac{1}{2}$ kg	₹ 40.50/kg	₹60.75
(c)	Green beans	$\frac{1}{2}$ kg	₹ 35/kg	₹17.50
(d)	Lady finger	2 kg	₹ 30.50/kg	₹61.00
			Total	₹161.25

(b)

Green Vegetable Store				
S.No.	Item	Quantity	Rate	Amount
(a)	Potatoes	3 kg	₹ 18/kg	₹ 54.00
(b)	Brinjals	$\frac{1}{2}$ kg	₹ 12/kg	₹ 6.00
(c)	Capsicum	1 kg	₹ 17/kg	₹ 17.00
(d)	Carrots	500 g	₹ 24/kg	₹ 12.00
			Total	₹ 89.00

(c)

Fresh Fruit Store				
S.No.	Item	Quantity	Rate	Amount
(a)	Apples	2 kg	₹ 70/kg	₹ 140.00
(b)	Mangoes	3 kg	₹ 45/kg	₹ 135.00
(c)	Oranges	1 kg	₹ 25/kg	₹ 25.00
(d)	Guavas	2 kg	₹ 55/kg	₹ 110.00
(e)	Cheekoo	$\frac{1}{2}$ kg	₹ 30/kg	₹ 15.00
			Total	₹ 425.00

Amount left with Mr. Jagat = ₹ 575.00

(d)

Fresh Fruit Store				
S.No.	Item	Quantity	Rate	Amount
(a)	Pomegranates	1 kg	₹ 135/kg	₹ 135.00
(b)	Pears	2 kg	₹ 60/kg	₹ 120.00
(c)	Oranges	2 kg	₹ 25/kg	₹ 50.00
			Total	₹ 305.00

Revision Exercise

1. (a) 40 rupees 75 paise = ₹ 40.75
(b) 7 rupees 90 paise = ₹ 7.90
(c) 73 rupees 24 paise = ₹ 73.24
(d) 204 rupees 5 paise = ₹ 204.05
(e) 26 rupees = ₹ 26.00
(f) 55 paise = ₹ 0.55

2. (a) ₹ 90.45 = 90 rupees 45 paise
(b) ₹ 7.85 = 7 rupees 85 paise
(c) ₹ 4.55 = 4 rupees 55 paise
(d) ₹ 0.30 = 30 paise
(e) ₹ 93.07 = 93 rupees 7 paise
(f) ₹ 15.00 = 15 rupees
(g) ₹ 9.05 = 9 rupees 5 paise
(h) ₹ 0.06 = 6 paise

3. (a) 6 rupees = 600 paise
(b) 2645 paise = 26 rupees 45 paise
(c) 14 rupees 15 paise = 1415 paise
(d) 209 paise = 2 rupees 9 paise
(e) ₹ 3.08 = 308 paise
(f) ₹ 24.50 = 2450 paise

4. (a)
₹ 71.35
+ ₹ 40.95
₹ 112.30

(b)
₹ 110.60
– ₹ 76.00
₹ 34.60

(c)
₹ 94.45
+ ₹ 65.65
₹ 160.10

(d)
₹ 86.00
– ₹ 17.33
₹ 68.67

(e)
₹ 134.40
× ₹ 8
₹ 1075.20

(f) ₹95.75 ÷ 5 = ₹19.15

(g)
₹ 35.93
× ₹ 6
₹ 215.58

(h) ₹120.64 ÷ 4 = ₹30.16

5. (a)

The cost of a cap	=	₹ 72.40
The cost of an umbrella	=	₹ 245.50
The cost of 6 caps	= +	₹ 240.00
Total cost of above items	=	₹ 557.90
Amount Kishore had	=	₹ 1000.00
Amount spent by him	= –	₹ 557.90
Amount left with him	=	₹ 442.10

(b)

Amount given to shopkeeper	=	₹ 500.00
The cost of sweets	= –	₹ 450.00
Amount got back by Reena	=	₹ 50.00

(c) The cost of a pencil box = ₹ 72.90
The cost of 8 pencil boxes = × ₹ 72.90
= ₹ 583.20

(d) The cost of 1 ice cream cup = ₹ 90.90
The cost of 6 ice cream cups = × ₹ 6
= ₹ 545.40

(e) The cost of 9 kg apples = ₹ 652.50
The cost of 1 kg apples = ₹ 652.50 ÷ 9
= ₹ 72.50

(f) The cost of 4 note books = ₹ 142.40
The cost of 1 note book = ₹ 142.40 ÷ 4
= ₹ 35.60

Case Based Questions

1. ₹ 45.75 = 4575 paise
Thus, (c) is the correct answer.

2. The price of 1 samosa = ₹ 10.25
The price of 10 samosas = ₹ 10.25 × 10
= ₹ 102.50
Thus, (b) is the correct answer.

3. 2350 paise = ₹ 23.50 = cost of 1 cutlet
Thus, (c) is the correct answer.

4. The cost of 5 burgers = ₹ 45.75 × 5 = ₹ 228.75
The cost of 2 cold drinks = ₹ 15.00 × 2 = ₹ 30.00
Total cost of 5 nirgers and 2 cold drinks
= ₹ 228.75 + ₹ 30.00 = ₹ 258.75
Thus, (b) is the correct answer.

5.

S.No.	Item	Rate	Quantity	Amount
1.	Pizza	₹ 140.00	1	₹ 140.00
2.	Sandwich	₹ 18.50	4	₹ 74.00
3.	Burger	₹ 45.75	6	₹ 274.50
4.	Cold drink	₹ 15.00	4	₹ 60.00
			Total	₹ 548.50

Thus, (a) is the correct answer.

HOTS

1. The cost 10 pens = ₹200
The cost 1 pen = ₹200 ÷ 10 = ₹20
The cost 5 pens = ₹20 × 10 = ₹100

2. 36 × ₹5 = ₹180
Amount available = ₹ 180.00
Cost of a bat = – ₹ 150.00
Amount left = ₹ 30.00

Mental Maths

A. 1. 800 paise = ₹ 8.00
2. 1600 paise = ₹ 16.00
3. 1845 paise = ₹ 18.45
4. ₹ 63 = 6300 paise
5. ₹ 64.65 = 64 rupees 65 paise
6. 51 2-rupee coins make ₹ 102.
7. 402 20-paise coins make ₹ 80.40.
8. 906 10-paise coins make ₹ 90.60.

B.

Column A	Column B
1. ₹ 26.73 + ₹ 22.40 = ₹ 49.13	(c) 4913 p
2. ₹ 57.20 – ₹ 19.35 = ₹ 37.85	(d) 3785 p
3. ₹ 16.02 × 8 = ₹ 128.16	(a) 12816 p
4. ₹ 90.15 ÷ 5 = ₹ 18.03	(b) 1803 p

C. 1. ₹ 87.40 = 8740 p
Thus, (d) is the correct answer.

2. The cost of 9 toffees = ₹ 72
The cost of 1 toffee = ₹ 72 ÷ 9 = ₹ 8
Thus, (b) is the correct answer.

3. 1800 p + 200 p = 2000 p = ₹ 20
Thus, (a) is the correct answer.

4. 5p = ₹ 0.05
Thus, (b) is the correct answer.

5. ₹ 6 = 6 × 100 p = 600 p
Thus, (c) is the correct answer.

6. 1300 p = ₹ 1300 ÷ 100 = ₹ 13
Thus, (b) is the correct answer.

Chapter 12. Data Handling

Recap

1. (a) Mango is the most popular flavour.
(b) Butterscotch is the least popular flavour.
(c) 12 – 5 = 7 ice creams
(d) 8 + 6 + 7 + 5 + 12 = 38 students

2.

Days	Number of kites			
	Red	Yellow	Blue	Green
Monday	14	12	13	15
Tuesday	12	16	18	8
Wednesday	10	14	11	15
Thursday	8	0	5	4
Friday	10	4	6	5
Saturday	12	9	13	14
Total	66	55	66	61

Exercise 12.1

1.

Aquarium	No. of fish	Tally marks
1	12	𝍸 𝍸 II
2	16	𝍸 𝍸 𝍸 I
3	24	𝍸 𝍸 𝍸 𝍸 IIII
4	18	𝍸 𝍸 𝍸 III

2.

Weight	Tally marks	No. of students
22 kg	𝍸	5
24 kg	𝍸 II	7
25 kg	IIII	4
26 kg	IIII	4
30 kg	𝍸 I	6
	Total	26

(a) 24 kg is the most common weight.

(b) 6 students weigh 30 kg.

(c) 4 students weigh 25 kg.

(d) 26 students were weighed by the teacher.

3.

Player	Tally marks	No. of students
Dhoni	𝍸 III	8
Jadeja	III	3
Sachin	𝍸	5
Sehwag	III	3
Gambhir	IIII	4
Ganguli	II	2
Yuvraj	II	2
	Total	27

(a) Dhoni is the most favourite.

(b) Sachin is liked by five students.

(c) 2 students liked Ganguli.

(d) 4 students liked Gambhir.

Exercise 12.2

1. Size of shoes worn by students

Size of shoes (in cm)	Number of students
1–2	👞 👞 👞
3–4	👞 👞 👞 👞
5–6	👞 👞 👞 👞 👞 👞
7–8	👞 👞 👞 👞 👞
9–10	👞 👞 👞 👞
11–12	👞 👞 👞
13–14	👞 👞 👞 👞

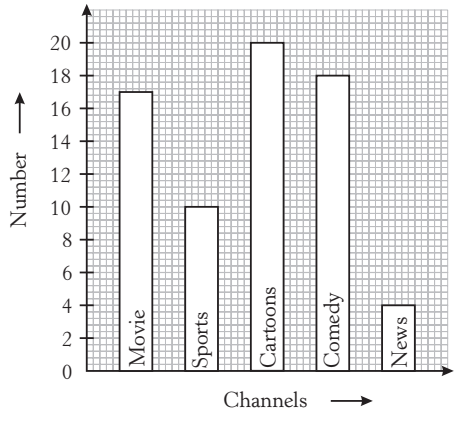
Key : Each 👞 represents 2 shoes.

2. (a) 62 days (b) August
(c) June (d) 14 days (e) 16 days

Exercise 12.3

1. (a) 28 books (b) 40 books
(c) Week 4 (d) 16 books

2.



Revision Exercise

Colour	Tally marks	Number
Red	𝍸 II	7
Blue	𝍸	5
Green	𝍸 IIII	9
Yellow	IIII	4
Orange	𝍸 I	6
Pink	𝍸 III	8

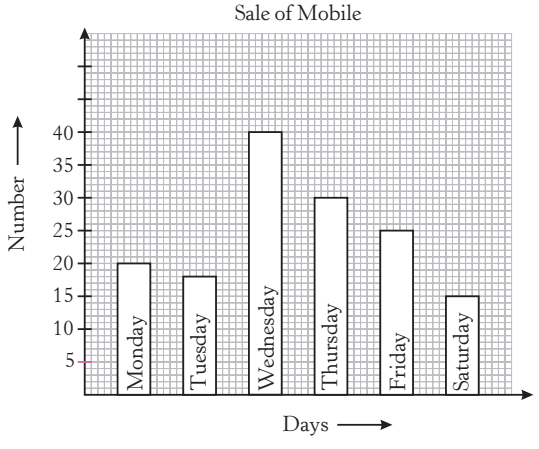
(a) 7, 5, 9, 4, 6, 8 (b) Green

(c) Yellow (d) 4 students

(e) 1 child

No. of shirts sold during a week	
Days	**Number**
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Key : Each represents 5 shirts.	

3.



HOTS

Total marks = 32 + 38 + 32 + 28 + 36 = 166.

Case Based Questions

1. 1 student likes to play basketball.
   Thus, (b) is the correct answer.
2. 10 students like to play cricket.
   Thus, (b) is the correct answer.
3. 4 students like to play tennis.
   Thus, (c) is the correct answer.
4. Cricket is the most popular sport.
   Thus, (c) is the correct answer.
5. Basketball is the least popular sport.
   Thus, (b) is the correct answer.

Mental Maths

1. 15 2. 12 3. 20
4. pictograph 5. tally marks

Test your knowledge-4

(Chapters 9 – 12)

1. (a) m (b) kilogram (c) *l*
2. (a) The number of pizzas sold by 'Pizza Hut' during a week
   (b) 5 pizzas (c) 190 pizzas
   (d) Sunday (e) 25 pizzas
3. (a) 1001 ml $\geq$ 1 *l* (b) 200 cm $\geq$ 1 m
   (c) 1500 g $\leq$ 2 kg (d) 4 kg $\geq$ 3500 g
   (e) 1 hour $\leq$ 140 minutes
   (f) 4 days $\geq$ 72 hours (g) 28 days $\leq$ 5 weeks
   (h) ₹ 5 = 500 p (i) 800 p $\leq$ ₹ 9
4. (a) 5 km 240 m = 5240 m
   (b) 9 km = 9000 m
   (c) 11 m = 1100 cm
   (d) 18 m 24 cm = 1824 cm
   (e) 6 kg = 6000 g
   (f) 1 kg 275 g = 1275 g
   (g) 9046 g = 9 kg 46 g
   (h) 8 *l* = 8000 ml
   (i) 4 *l* 220 ml = 4220 ml
   (j) 7240 ml = 7 *l* 240 ml
   (k) 6 hours = 360 minutes
   (l) 245 minutes = 4 hours 5 minutes
   (m) 18 rupees and 5 paise = ₹ 18.05
   (n) ₹ 7.65 = 765 paise
5. (a) 13 m 20 cm + 11 m 40 cm = 24 m 60 cm
   (b) 5 kg 175 g + 8 kg 940 g = 14 kg 115 g
   (c) 8 *l* 710 ml + 4 *l* 645 ml = 13 *l* 355 ml
   (d) ₹ 45.60 + ₹ 15.75 = ₹ 61.35
   (e) 24 m 16 cm – 8 m 72 cm = 15 m 44 cm
   (f) 9 kg 340 g – 4 kg 560 g = 4 kg 780 g
   (g) 12 *l* 210 ml – 4 *l* 575 ml = 7 *l* 635 ml
   (h) ₹ 85.10 – ₹ 24.95 = ₹ 60.15
6. (a) 𝍸 𝍸 𝍸 15

(b) 𝍸 𝍸 III — 13

(c) 𝍸 — 5

(d) 𝍸 IIII — 9

(e) 𝍸 I — 6

(f) 𝍸 𝍸 II — 12

Model Test paper-2

(Chapters 6 – 12)

1. (a) 3 (b) 7

(c) 4 (d) 7

(e) Fraction of squares = $\frac{4}{21}$

Fraction of rectangles = $\frac{7}{21}$

Fraction of triangles = $\frac{7}{21}$

Fraction of circles = $\frac{3}{21}$

2. (a) $\frac{4}{5}$

(b) 42 students

(c) ₹ 2.00

(d) 1083 kg

(e) 25 minutes

3.

S.No.	Name	No. of sides	No. of vertices
(a)	Triangle	3	3
(b)	Square	4	4
(c)	Rectangle	4	4
(d)	Circle	0	0