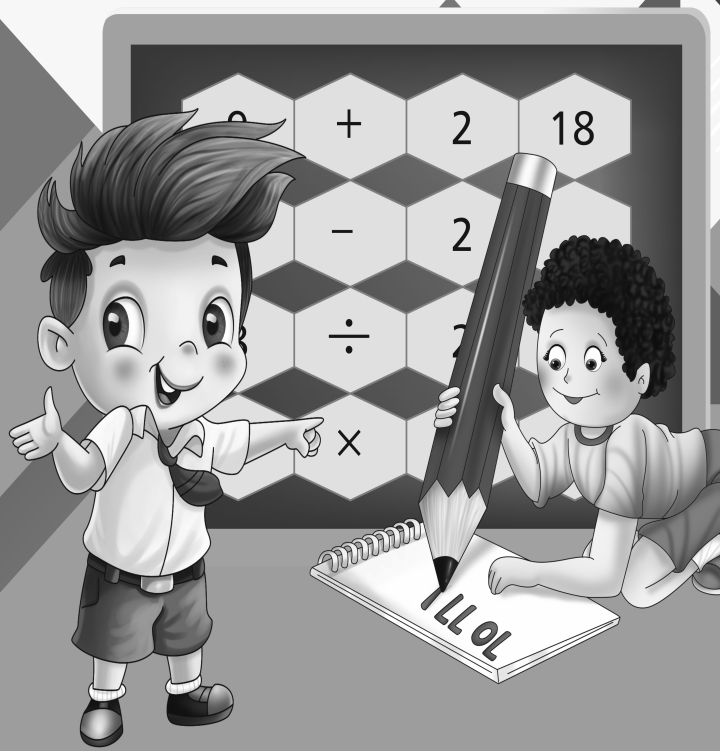
Timax®

Maths Magic

NEP 2020
ENHANCED EDITION

Teacher Manual



4

MATHS
CLASS 4

Ex. 1.1

1. (a) Numeral : 6449

Number name : Six thousand four hundred forty nine.

(b) Numeral : 4253

Number name : Four thousand two hundred fifty three.

2.

	L	TTh	Th	H	T	O
(a)		3	5	4	1	4
(b)			7	6	8	3
(c)		1	8	7	3	2
(d)		7	5	9	2	9
(e)	3	4	0	8	8	6
(f)		5	2	6	7	8
(g)		5	0	0	0	0
(h)		9	5	2	5	0

3. (a) One lakh forty one thousand nine hundred twenty five.
(b) Eight hundred seventy four.
(c) Two lakh three thousand two hundred six.
(d) Nine thousand fifty two.
(e) Eighty one thousand five hundred sixty eight.
(f) Two thousand one hundred seventy nine.
(g) Forty two thousand five hundred seventy six.
(h) Three lakh eighty thousand nine hundred one.
(i) Three thousand four hundred seven.

4.

	TTh	Th	H	T	O
(a)	5	8	3	0	4
(b)	9	1	7	0	1
(c)		7	9	0	6
(d)	7	4	2	2	0

5. (a) 8ones
2 tens
4 hundreds
3 thousands
6 ten thousands

(b) 3 ones
0 tens
2 hundreds
8 thousands
9 ten thousands

(c) 3 ones
9 tens
1 hundred
2 thousands
5 ten thousands

(d) 6 ones
8 tens
7 hundreds
4 thousands
8 ten thousands

6. (a) 49876 (b) 86543

Ex. 1.2

1. (a) 38,437 (b) 63,914 (c) 90,001 (d) 40275
(e) 579623 (f) 917638

2. (a) 8 ten thousands + 7 thousands + 9 hundreds + 4 tens + 2 ones.

(b) 7 ten thousands + 0 thousands + 4 hundreds + 9 tens + 3 ones.

(c) 9 ten thousands + 0 thousands + 0 hundreds + 0 tens + 4 ones.

(d) 3 ten thousands + 2 thousands + 4 hundreds + 1 tens + 6 ones.

(e) 8 ten thousands + 7 thousands + 5 hundreds + 0 tens + 3 ones.

3. (a) 4936 (b) 92641 (c) 7356 (d) 66024

(e) 95047 (f) 88888

4. (a) $7 \times 10000 + 9 \times 1000 + 2 \times 100 + 1 \times 10 + 4$

(b) $8 \times 10000 + 0 \times 1000 + 5 \times 100 + 6 \times 10 + 4$

(c) $2 \times 10000 + 3 \times 1000 + 6 \times 100 + 3 \times 10 + 4$

(d) $8 \times 10000 + 8 \times 1000 + 8 \times 100 + 8 \times 10 + 8$

(e) $8 \times 10000 + 5 \times 1000 + 6 \times 100 + 7 \times 10 + 2$

5. (a) $7 \times 1000 + 2 \times 100 + 1 \times 10 + 9$

(b) $8 \times 10000 + 2 \times 1000 + 4 \times 100 + 6 \times 10 + 2$

(c) $5 \times 10000 + 5 \times 100 + 2 \times 10 + 1$

(d) $6 \times 10000 + 4 \times 10$

(e) $7 \times 10000 + 4 \times 1000 + 9 \times 10 + 1$

(f) $3 \times 10000 + 2 \times 1000 + 4 \times 100 + 1 \times 10 + 5$

(g) $7 \times 10000 + 2 \times 1000 + 3 \times 10 + 1$

(h) $8 \times 10000 + 9 \times 1000 + 3 \times 100 + 2 \times 10 + 5$

(i) $9 \times 10000 + 8$

(j) $2 \times 10000 + 8 \times 1000 + 4 \times 100 + 1 \times 10 + 5$

(k) $8 \times 100000 + 3 \times 10000 + 6 \times 1000 + 2 \times 100 + 4 \times 10 + 0$

(l) $9 \times 100000 + 2 \times 10000 + 6 \times 100 + 3 \times 10 + 8$

(m) $5 \times 100000 + 4 \times 10000 + 2 \times 1000 + 8 \times 100 + 6 \times 10 + 5$

(n) $3 \times 100000 + 6 \times 10000 + 4 \times 1000 + 2 \times 100 + 8 \times 10 + 9$

(o) $5 \times 100000 + 4 \times 10000 + 3 \times 1000 + 2 \times 100 + 1 \times 10 + 0$

Ex. 1.3

1. (a) A (b) D (c) A (d) D

2. (a) 8008 (b) 1961 (c) 5872 (d) 4040
(e) 2186 (f) 347

3. (a) 7212 (b) 66660 (c) 5550 (d) 4212
(e) 100050 (f) 9020

4. (a) 2727 > 6767 > 7676 > 31331
(b) 36511 > 46744 > 64110 > 86144
(c) 2412 > 4124 > 4134 > 31437
(d) 21206 > 42222 > 622304 > 821309

5. (a) 167404 < 96173 < 61476 < 3747
(b) 6541 < 4561 < 1699 < 1459
(c) 876140 < 64613 < 64100 < 41604
(d) 716200 < 367126 < 7612 < 6172
(e) 350056 < 85050 < 55504 < 55002

Ex. 1.4

1. (a) 12379 (b) 10357 (c) 24678 (d) 2237

2. (a) 76432 (b) 97530 (c) 7310 (d) 521

3. (a) 256890 (b) 103367 (c) 144467 (d) 124467
(e) 345558

4. (a) 99999 (b) 87643 (c) 86543 (d) 86432

5. (a) 999999 (b) 988654 (c) 989999 (d) 989999
(e) 498765

Mental Maths

1. 841, 706,705, 674, 509, 242, 185, 183
2. 874, 830, 818, 443, 391, 343, 239, 076

Sum up

1. (a) 47296, 47306, 47316 (b) 21348, 21448, 21548
(c) 49,106, 50,106, 51,106 (d) 72,215, 82,215, 92,215

2. (a) 7000 (b) 700 (c) 70000 (d) 70 (e) 7

3. 4 ones 1 ten 2 hundreds 8 thousands 7 ten thousands

4. (a) 56781 (b) 78085 (c) 25020 (d) 306590

5. (a) 10234 (b) 10000 (c) 30000 (d) 10060
(e) 24010

6. Area of Delhi = 342236 sq.km.
Expanded from = 300000 + 40000 + 2000 + 200 + 30 + 6
Standard from = 342236

Beat the Clock

(a) 4888	(b) 2241	(c) 4118	(d) 1843
(e) 358	(f) 152	(g) 781	(h) 278
(i) 2837	(j) 3221	(k) 8400	(l) 1335
(m) 2898	(n) 906	(o) 650	(p) 8700

Ex. 2.1

1. (a)

	Check
5213	7223
+ 2010	− 2010
7223	5213

Estimated Answer = 7000

(b)

	Check
9836	14158
+ 4322	− 4322
14158	9836

Estimated Answer = 14000

(c)

4321	4648
+ 327	− 327
4648	4321

Estimated Answer = 5000

2. (a)
1 3 7 6
+ 4 9 8 1
6 3 5 7

(b)
3 4 6 8 5
+ 2 8 7 2 4
4 4 8 9 3
1 0 8 3 0 2

(c)
4 3 2 5 4
+ 2 7 4 0 0
7 0 6 5 4

3. Pages in the dictionary = 2012
Pages added in the new version = 1003

Total Pages in the new version = 3015

The new version contains 3015 Pages.

4. Number of Old DVD = 5416

Number of New DVD = 6986

Total DVDS 12402

∴ The video library has 12,402 DVDS

5. Cost of Motor bike = ₹ 35,750

Cost of Secondhand Maruti Car = ₹ 45,895

Total cost of Bike and Car = ₹ 84645

∴ Cost of bike and Car is ₹ 81645

$$\begin{array}{r} {\scriptstyle 1\,1\,1} \\ 35750 \\ 45895 \\ \hline 81645 \end{array}$$

6. Number of candidates, last year = 35627

Number of more candidates this year = 12348

Total candidates appeared this year = 47975

∴ 47975 candidates appeared this year

7. Cost of colour television = ₹ 30250

More money needed to buy = ₹ 19490

Home theatre

Cost of Home theatre = ₹ 49740

∴ Cost of Home theatre is = ₹ 49,740

8. Cost of sofa set = ₹ 33,490

Cost of refrigerator = ₹ 19,640

∴ Total amount spent by Amit = 53130

∴ Amit spent = ₹ 53,130

Mental Maths

Horizontal →	**Vertical ↓**
1. 28375	**1.** 23896
4. 88542	**2.** 38546
5. 68651	**3.** 54281

Ex. 2.2

1. (a) 85 + 98 = 98 + 85 (b) 403 + 798 = 798 + 403

(c) $0 + 734 = 734$ (d) $0 + 79602 = 79602$

2. (a) $(8 + 3) + 5 = 8 + (3 + 5) = 16$

(b) $(4 + 9) + 1 = 4 + (9 + 1) = 14$

Ex. 2.3

1. (a)

8945	4573	
− 4372	+ 4372	
4573	8945	

(b)

43985	21648	
− 22337	− 22337	
21648	43985	

(c)

56864	19045	
− 37819	+ 37819	
19045	56864	
		Check

(d)

90080	10161	
− 79919	+ 79919	
10161	90080	
		Check

2. (a)

7637	4800	
− 2837	+ 28 37	
4800	7637	
		Check

(b)

36004	14948	
− 21056	+ 21056	
14948	36004	
		Check

(c)

5869	3528	
− 2341	+ 2341	
3528	5869	

(d)

8497	2812	
− 5685	+ 5685	
2812	8497	

3. Initial Amount in the account = ₹ 40890

Money withdrawn = ₹ –25380

Balance in the account = ₹ 15,510

₹ 15,510 was the balance after withdrawal

4. Apples boxes in the cold storage = 42,681

Boxes sent to fruit-sellers = – 1248

Boxes Left = 41433

∴ 41,433 boxes were left in the cold storage.

5. Toffees manufactured in a week = 43217

Toffees distributed to dealers = – 28415

Toffees remaining = 14802

∴ Ans. = 14802 toffees

6. Bags of wheat in the godown = 56325

Bags issued for public distribution = 18469

Bags left in the godown = 37856

∴ 37,856 bags were left in the godown.

7. People watching the match on first day = 62413

Spectators on second day = 72461

∴ Increase in the spectators = 72461 – 62413

$$\begin{array}{r} 72461 \\ -\ 62413 \\ \hline 10048 \end{array}$$

∴ 10048 spectators increased on the second day.

8. Points required for level 2 = 20,000

Points kunal has = – 254

Points needed to reach level 2 = 19746

∴ Kunal needs 19746 points to reach level 2

9. (a) $\begin{array}{r} 6000 \\ -\ 4837 \\ \hline 1163 \end{array}$ (b) $\begin{array}{r} 7004 \\ -\ 3298 \\ \hline 3706 \end{array}$ (c) $\begin{array}{r} 74000 \\ -\ 43265 \\ \hline 30735 \end{array}$ (d) $\begin{array}{r} 9000 \\ -\ 5836 \\ \hline 3164 \end{array}$

Ex. 2.4

1. (a) $\begin{array}{r} 5473 \\ -\ 329 \\ \hline 5144 \end{array}$ (b) $\begin{array}{l} 329 \rightarrow (329+1) \rightarrow 330 \\ -\ 159 \rightarrow (159+1) \rightarrow 160 \\ \hline 170 \qquad\qquad\quad 170 \end{array}$

(c) $\begin{array}{l} 532 \rightarrow (532+2) \rightarrow 530 \\ +\ 208 \rightarrow (208+2) \rightarrow 210 \\ \hline 740 \qquad\qquad\quad 740 \end{array}$

(d) $\begin{array}{l} 2376 \rightarrow (2376+4) \rightarrow 2380 \\ -\ 2046 \rightarrow (2046+4) \rightarrow 2050 \\ \hline 0330 \qquad\qquad\quad 0330 \end{array}$

(e) 3500
− 429
3071

(f) 589 → (589 + 1) → 590
+ 361 → (36 − 1) → + 360
950 950

(g) 498 → (498 + 2) → 500
+ 202 → (202 − 2) → + 200
700 700

(h) 54
+ 32
86

2. (a) 349 + 251 = 600 (b) 223 + 99 + 98 = 420
(c) 3241 + 991 = 4232 (d) 143 + 120 = 263
(e) 130 + 1150 = 1280 (f) 80 + 168 = 248

Beat the Clock

Do yourself

Mental Math

Do yourself

Sum up

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

2. (a) 842 → (842 + 8) → 850
− 302 → (302 − 8) → − 310
540 540

(b) 828 → (828 + 2) → 830
+ 202 → (212 − 2) → + 210
1040 1040

(c) 314
− 286
028

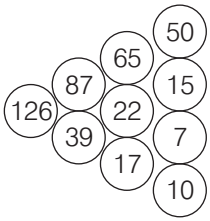
(d) 198 → (198 + 2) → 200
+ 202 → (202 − 2) → + 200
400 400

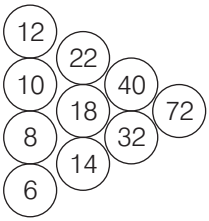
3. (a) 3 2 5 4
+ 2 2 0 7
5 4 6 1

(b) 1 3 7 6
+ 4 9 8 1
6 3 5 7

(c) 7 3 2 0
− 4 5 6 8
2 7 5 2

4.





5. Krishna bought oven for = ₹ 19234

Sneha bought oven for = ₹ 22436

Money Sneha Paid more = ₹ 22436 – 19234

₹ 22436
19234
03202

Sneha paid ₹ 3,202 more for the oven.

Mental Maths

627	67	426
× 24	× 19	× 73
2508	603	1278
12540	670	29820
15048	1273	31098

Ex. 3.1

1. (a) 176 × 20 = 3520

(b) 315 × 40 = 12600

(c) 417 × 60 = 25020

(d) 680 × 80 = 54400

(e) 8360 × 90 = 752400

(f) 45268 × 20 = 905360

(g) 92803
$\times$ 10
928030

(h) 3642
$\times$ 40
145680

(i) 4528
$\times$ 20
90560

(j) 3333
$\times$ 50
166650

(k) 92620
$\times$ 80
7409600

(l) 64320
$\times$ 90
5788800

2. (a) $20 \times 40 = 800$
(b) $56 \times 50 = 2800$
(c) $38 \times 400 = 15200$
(d) $75 \times 200 = 15000$
(e) $78 \times 200 = 15600$
(f) $15 \times 700 = 10500$
(g) $540 \times 30 = 16200$
(h) $100 \times 10 = 1000$
(i) $2000 \times 80 = 160000$
(j) $34 \times 300 = 10200$
(k) $20 \times 80 \times 20 = 32000$
(l) $100 \times 10 \times 30 = 30000$
(m) $540 \times 300 = 162000$
(n) $415 \times 600 = 249000$

3. (a) $12 \times 5 \times 23$
$= 60 \times 23$
$= 1380$

(b) $91 \times 20 \times 5$
$= 91 \times 100$
$= 9100$

(c) $40 \times 62 \times 5$
$= 200 \times 62$
$= 12400$

(d) $50 \times 51 \times 10$
$= 500 \times 51$
$= 25500$

(e) $17 \times 40 \times 4$
$= 160 \times 17$
$= 2720$

(f) $23 \times 50 \times 8$
$= 23 \times 400$
$= 9200$

(g) $7 \times 20 \times 10$
$= 7 \times 200$
$= 1400$

(h) $60 \times 40 \times 3$
$= 2400 \times 3$
$= 7200$

(i) $36 \times 20 \times 5$

$= 36 \times 100$

$= 3600$

Mental Maths

(a) $5 \times 60 = 300$ min

(b) $32 \times 60 = 1920$ min

(c) $21 \times 60 = 1260$ min

(d) $36 \times 60 = 2160$ min

Mental Maths

Do yourself

Ex. 3.2

1. $4567 \times 3894 = 3894 \times 4567$

2. $2893 \times 0 = 0$

3. $567 \times 48903 = 48903 \times 567$

4. $7093 \times 218 \times 4159 = 218 \times 4159 \times 7093$

5. $3941 \times 2834 \times 0 = 0$

6. $39421 \times 1 = 39421$

7. $4834 \times 0 = 4834 \times 0$

8. $245 \times 3000 = 735000$

9. $145 \times 100 = 14500$

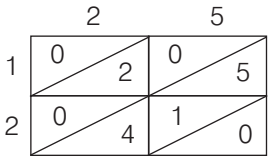
10. $30 \times 20 = 600$

11. $30 \times 50 \times 20 = 30000$

12. $25(375 \times 482) = (25 \times 375) + (25 \times 482)$

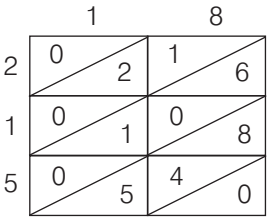
Ex. 3.3

1. (a) 25×12



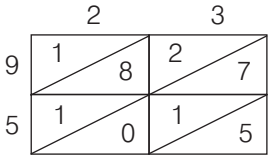
Ans = 300

(b) 18×215



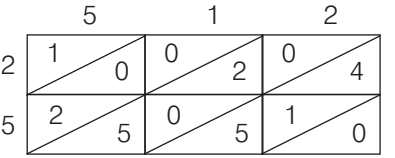
Ans = 3870

(c) 23×95



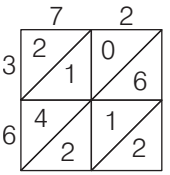
Ans = 2185

(d) 512×25



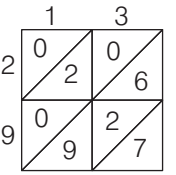
Ans = 12800

(e) 72×36



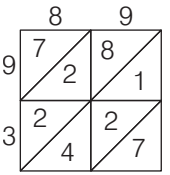
Ans = 2592

(f) 13×29



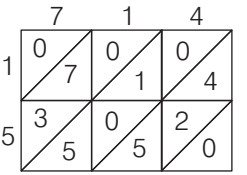
Ans = 377

(g) 89×93



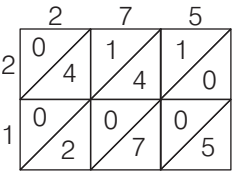
Ans = 8277

(h) 714×15



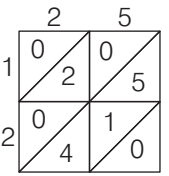
Ans = 10710

(i) 275×21



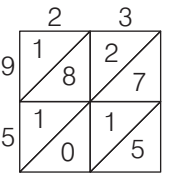
Ans = 5775

2. (a)



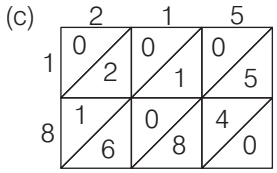
Ans = 300

(b)



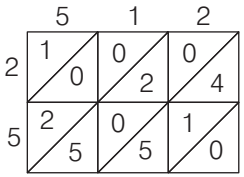
Ans = 2185

(c)



Ans = 3870

(d)



Ans = 12800

Ex. 3.4

1. 490×78

$490 \longrightarrow 500$

$78 \longrightarrow \times 80$

Estimated Product = $\underline{40000}$

2. 648×12

$648 \longrightarrow 650$

$12 \longrightarrow \times 10$

Estimated Product $\underline{= 6500}$

3. 578×475

$578 \longrightarrow 580$

$475 \longrightarrow \times 470$

$\underline{272600}$

4. 512×183

$512 \longrightarrow 510$

$183 \longrightarrow \times 180$

$\underline{91800}$

5. 564×17

$564 \longrightarrow 560$

$17 \longrightarrow \times 20$

$\underline{11200}$

6. 535×28

$835 \longrightarrow 830$

$28 \longrightarrow \times 30$

$\underline{24900}$

7. 192×281

$192 \longrightarrow 190$

$281 \longrightarrow \times 280$

$\underline{53200}$

8. 19×29

$19 \longrightarrow 20$

$29 \longrightarrow \times 30$

$\underline{600}$

9. 432×108

$$\begin{array}{rl} 432 \longrightarrow & 430 \\ 108 \longrightarrow & \times 100 \\ & \underline{43000} \end{array}$$

Mental Maths

$$\begin{array}{r} 43 \\ \times 76 \\ \hline 258 \\ 3010 \\ \hline 3268 \end{array}$$

Ex. 3.5

1. (a) $\begin{array}{r} 96 \\ \times 83 \\ \hline 288 \\ 7680 \\ \hline 7968 \end{array}$ (b) $\begin{array}{r} 46 \\ \times 45 \\ \hline 230 \\ 1840 \\ \hline 2070 \end{array}$ (c) $\begin{array}{r} 87 \\ \times 72 \\ \hline 174 \\ 6090 \\ \hline 6264 \end{array}$ (d) $\begin{array}{r} 94 \\ \times 83 \\ \hline 282 \\ 7520 \\ \hline 7802 \end{array}$

(e) $\begin{array}{r} 85 \\ \times 23 \\ \hline 255 \\ 1700 \\ \hline 1955 \end{array}$ (f) $\begin{array}{r} 94 \\ \times 27 \\ \hline 658 \\ 1880 \\ \hline 2538 \end{array}$ (g) $\begin{array}{r} 47 \\ \times 83 \\ \hline 141 \\ 3760 \\ \hline 3901 \end{array}$ (h) $\begin{array}{r} 79 \\ \times 57 \\ \hline 553 \\ 3950 \\ \hline 4503 \end{array}$

2. (a) $\begin{array}{r} 85 \\ \times 29 \\ \hline 765 \\ 1700 \\ \hline 2465 \end{array}$ (b) $\begin{array}{r} 69 \\ \times 72 \\ \hline 138 \\ 4830 \\ \hline 4968 \end{array}$ (c) $\begin{array}{r} 87 \\ \times 56 \\ \hline 522 \\ 4350 \\ \hline 4872 \end{array}$ (d) $\begin{array}{r} 79 \\ \times 63 \\ \hline 237 \\ 4740 \\ \hline 4977 \end{array}$

(e) $\begin{array}{r} 83 \\ \times 64 \\ \hline 332 \\ 4980 \\ \hline 5312 \end{array}$ (f) $\begin{array}{r} 97 \\ \times 54 \\ \hline 388 \\ 4850 \\ \hline 5238 \end{array}$ (g) $\begin{array}{r} 76 \\ \times 47 \\ \hline 532 \\ 3040 \\ \hline 3572 \end{array}$ (h) $\begin{array}{r} 47 \\ \times 94 \\ \hline 188 \\ 4230 \\ \hline 4418 \end{array}$

(i) 29 × 92 = 58, 2610 → 2668

(j) 45 × 55 = 225, 2250 → 2475

(k) 66 × 28 = 528, 1320 → 1848

(l) 39 × 47 = 273, 1560 → 1833

Ex. 3.6

1.
$$\begin{array}{r} 425 \\ \times\ 425 \\ \hline 2125 \\ 8500 \\ 170000 \\ \hline 180625 \end{array}$$

Yes the multiplication is correct.

2. Money saved in one month = ₹ 365

Money saved in a year = ₹ 365×12

$$\begin{array}{r} 365 \\ \times\ 12 \\ \hline 730 \\ 3650 \\ \hline 4380 \end{array}$$

₹ 4380 is saved in one year.

3. Bulbs produced daily = 325×6

= 1950 bulbs

Bulbs produced in 27 days = 1950×27

$$\begin{array}{r} 1950 \\ \times\ 27 \\ \hline 13650 \\ 39000 \\ \hline 52650 \end{array}$$

∴ 52650 Bulbs are produced in 27 days.

4. Pages read in one hour = 35

$\therefore$ Pages read in 7 haves = $35 \times 7 = 245$

$\therefore$ Pages read in one day = 245

$\therefore$ Pages read in 25 days = 245×25

$$\begin{array}{r} 245 \\ \times\ 25 \\ \hline 1225 \\ 4900 \\ \hline 6125 \end{array}$$

$\therefore$ the book has 6125 Pags

5. Mangoes in one basket = 378

$\therefore$ Number of Mangoes in 406 baskets = 378×406

$$\begin{array}{r} 378 \\ \times\ 406 \\ \hline 2268 \\ 0000 \\ 151200 \\ \hline 153468 \end{array}$$

$\therefore$ There are 153468 nabgoes in 406 baskets

6. Scooter produced in 1 month = 57

$\therefore$ Scooters produced in 1 year = 57×12

$$\begin{array}{r} 57 \\ \times\ 12 \\ \hline 114 \\ 570 \\ \hline 684 \end{array}$$

$\therefore$ Scooters produced in 9 years = 684×9

$$\begin{array}{r} 684 \\ \times\ 9 \\ \hline 6156 \end{array}$$

$\therefore$ 6156 Scooters are produced in 1 year

7. Passengers a bus can carry = 98

∴ Passengers in 346 buses = 346×98

$$\begin{array}{r} 346 \\ \times\ 98 \\ \hline 2768 \\ 31140 \\ \hline 33908 \end{array}$$

∴ 33908 passengers can travel in 346 buses.

Sum up

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

2. (a) $\begin{array}{r} 345 \\ \times\ 12 \\ \hline 4140 \end{array}$ (b) $\begin{array}{r} 361 \\ \times\ 15 \\ \hline 5415 \end{array}$ (c) $\begin{array}{r} 420 \\ \times\ 16 \\ \hline 6720 \end{array}$ (d) $\begin{array}{r} 243 \\ \times\ 17 \\ \hline 4131 \end{array}$

3. (a) 40, 50, 60, 70 (b) 400, 500, 600, 700

(c) 7000, 9000, 11000, 13000 (d) 6000, 60000, 600000, 6000000

4. (a) $21 \times 81 \times 15$

$$\begin{array}{r} 21 \\ \times\ 81 \\ \hline 21 \\ 1680 \\ \hline 1701 \end{array} \qquad \begin{array}{r} 1701 \\ \times\ 15 \\ \hline 8505 \\ 17010 \\ \hline 25515 \end{array}$$

Ans = 25515

(b) $32 \times 96 \times 45$

$$\begin{array}{r} 32 \\ \times\ 96 \\ \hline 192 \\ 2880 \\ \hline 3072 \end{array} \qquad \begin{array}{r} 3072 \\ \times\ 45 \\ \hline 15360 \\ 122880 \\ \hline 138240 \end{array}$$

Ans = 138240

(c) $66 \times 33 \times 77$

$$\begin{array}{r} 66 \\ \times\ 33 \\ \hline 198 \\ 1980 \\ \hline 2178 \end{array} \qquad \begin{array}{r} 2178 \\ \times\ 77 \\ \hline 15246 \\ 152460 \\ \hline 167706 \end{array}$$

Ans = 167706

(d) $101 \times 22 \times 54$

$$\begin{array}{r} 101 \\ \times\ 22 \\ \hline 202 \\ 2020 \\ \hline 2222 \end{array} \qquad \begin{array}{r} 2222 \\ \times\ 54 \\ \hline 8888 \\ 8888 \\ 111100 \\ \hline 119988 \end{array}$$

Ans 119988

(e) $205 \times 15 \times 195$

205	3075
$\times 15$	$\times 195$
1025	15375
2050	276750
3075	307500
	599625

Ans = 599625

(f) $32 \times 49 \times 565$

32	568
$\times 49$	$\times 565$
288	7840
1280	94080
1568	784000
	885920

Ans = 885920

5. (a) 163×54

652
8150
8802

(b) 163×45

815
6520
7335

(c) 163×504

652
0000
81500
82152

(d) 163×405

815
0000
65200
66015

CHAPTER 04

Ex. 4.1

Multiplication facts	Corresponding	Division facts
$2 \times 9 = 18$	$18 \div 2 = 9$	$18 \div 9 = 2$
$8 \times 6 = 48$	$48 \div 6 = 8$	$48 \div 8 = 6$
$8 \times 9 = 72$	$72 \div 8 = 9$	$72 \div 9 = 8$
$10 \times 3 = 30$	$30 \div 10 = 3$	$30 \div 3 = 10$
$3 \times 4 = 12$	$12 \div 3 = 4$	$12 \div 4 = 3$
$6 \times 5 = 30$	$30 \div 6 = 5$	$30 \div 5 = 6$

Ex. 4.2

1. 84 ÷ 127

$$\begin{array}{r} 7 \\ 12\overline{)\,84} \\ 84 \\ \hline 60 \end{array}$$

Quotient = 07

Remainder = 0

2. 97 ÷ 1

$$\begin{array}{r} 97 \\ 1\overline{)97} \\ 9 \\ \hline 07 \\ 0 \\ \hline \end{array}$$

Quotient = 7

Remainder = 0

3. 82 ÷ 14

$$\begin{array}{r} 5 \\ 14\overline{)82} \\ 70 \\ \hline 12 \end{array}$$

Quotient = 5

Remainder = 12

4. 76 ÷ 1

$$\begin{array}{r} 4 \\ 16\overline{)76} \\ 64 \\ \hline 12 \end{array}$$

Quotient = 4

Remainder = 12

5. 98 ÷ 27

$$\begin{array}{r} 3 \\ 27\overline{)\,98} \\ 81 \\ \hline 17 \end{array}$$

Quotient = 3

Remainder = 17

6. 89 ÷ 24

$$\begin{array}{r} 3 \\ 24\overline{)\,89} \\ 72 \\ \hline 17 \end{array}$$

Quotient = 3

Remainder = 17

7. 826 ÷ 34

$$\begin{array}{r} 24 \\ 34\overline{)\,826} \\ 68 \\ \hline 146 \\ 136 \\ \hline 010 \end{array}$$

8. 768 ÷ 45

$$\begin{array}{r} 17 \\ 45\overline{)768} \\ 45 \\ \hline 318 \\ 315 \\ \hline 3 \end{array}$$

Quotient = 24

Remainder = 10

9. 960 ÷ 51

$$\begin{array}{r} 18 \\ 51\overline{)960} \\ \underline{51} \\ 450 \\ \underline{408} \\ 042 \end{array}$$

Quotient = 18

Remainder = 42

11. 426 ÷ 57

$$\begin{array}{r} 7 \\ 57\overline{)426} \\ \underline{399} \\ 027 \end{array}$$

Quotient = 7

Remainder = 27

Quotient = 17

Remainder = 3

10. 550 ÷ 13

$$\begin{array}{r} 42 \\ 13\overline{)550} \\ \underline{52} \\ 30 \\ \underline{26} \\ 04 \end{array}$$

Quotient = 42

Remainder = 4

12. 897 ÷ 63

$$\begin{array}{r} 14 \\ 63\overline{)897} \\ \underline{63} \\ 267 \\ \underline{252} \\ 015 \end{array}$$

Quotient = 14

Remainder = 15

Ex. 4.3

		Quotient	Remainder
(a)	156 ÷ 100	1	56
(b)	356 ÷ 10	35	6
(c)	845 ÷ 100	8	45
(d)	187 ÷ 100	1	87
(e)	3874 ÷ 100	38	74
(f)	9563 ÷ 100	95	63
(g)	4261 ÷ 10	426	1
(h)	7297 ÷ 1000	7	297

		Quotient	Remainder
(i)	3895 ÷ 1000	3	895
(j)	4856 ÷ 10	48	56
(k)	9563 ÷ 100	95	63

2. Dividend = Divisor × Quotient + Remainder

$= 74 \times 32 + 53$

$= 2368 + 53$

Dividend = 2421

3. (a) Dividend = Divisor × Quotient + Remainder

$= 35 \times 42$

$= 1470$

(b) Dividend = Divisor × Quotient + Remainder

$= 96 \times 401 + 0$

$= 38496$

(c) Dividend = Divisor × Quotient + Remainder

$= 125 \times 48 + 0$

$= 6000$

(d) Dividend = Divisor × Quotient + Remainder

$= 74 \times 32 + 9$

$= 2368 + 9$

$= 2377$

(e) Dividend = Divisor × Quotient + Remainder

$= 396 \times 52 + 205$

$= 20797$

Mental Maths

(a)
```
      4
1000)4300
    -4000
     300
```

(b)
```
     31
1000)310400
    -3000
     1040
     1000
      400
```

(c)
$$\begin{array}{r} 11 \\ 1000\overline{)11100} \\ -1000 \\ \hline 1100 \\ 1000 \\ \hline 100 \end{array}$$

(d)
$$\begin{array}{r} 896 \\ 1000\overline{)896000} \\ -8000 \\ \hline 9600 \\ 9000 \\ \hline 6000 \\ 6000 \\ \hline \times \end{array}$$

Ex. 4.4

1. (a) 879 ÷ 39

$$\begin{array}{r} 22 \\ 39\overline{)879} \\ 78 \\ \hline 099 \\ 78 \\ \hline 21 \end{array}$$

Quotient = 22

Remainder = 21

(b) 9387 ÷ 75

$$\begin{array}{r} 125 \\ 75\overline{)9387} \\ 75 \\ \hline 188 \\ 150 \\ \hline 0387 \\ 375 \\ \hline 012 \end{array}$$

Quotient = 125

Remainder = 12

(c) 9215 ÷ 12

$$\begin{array}{r} 767 \\ 12\overline{)9215} \\ 84 \\ \hline 081 \\ 72 \\ \hline 095 \\ 84 \\ \hline 11 \end{array}$$

Quotient = 767

Remainder = 11

(d) 946 ÷ 35

$$\begin{array}{r} 27 \\ 35\overline{)946} \\ 70 \\ \hline 246 \\ 245 \\ \hline 1 \end{array}$$

Quotient = 27

Remainder = 1

2. (a) 567 ÷ 1 = 567

(b) 2956 ÷ 2951 = 1

(c) 0 ÷ 7956 = 0

(d) 7576 ÷ 1 = 7576

(e) $867 \div 867 = 1$ (f) $2847 \div 1 = 2847$

(g) $3051 \div 1 = 3051$ (h) $395 \div 1 = 395$

(i) $0 \div 7043 = 0$ (j) $4017 \div 4017 = 1$

3. (a) $456 \div 32$

$$
\begin{array}{r}
14 \\
32\overline{)456} \\
\underline{32} \\
136 \\
\underline{128} \\
008
\end{array}
$$

Quotient = 14

Remainder = 8

Verification

Dividend = Divisor × Quotient + Remainder

$= 32 \times 14 + 8 = 448 + 8 = 456$ (Dividend)

(b) $973 \div 48$

$$
\begin{array}{r}
20 \\
48\overline{)973} \\
\underline{96} \\
13 \\
\underline{0} \\
13
\end{array}
$$

Quotient = 20 Remainder = 13

Verification

Dividend = Divisor × Quotient + Remainder

$= 48 \times 20 + 13 = 960 + 13 = 973$ (Dividend)

(c) $7563 \div 64$

$$
\begin{array}{r}
118 \\
64\overline{)7563} \\
\underline{64} \\
116 \\
\underline{64}
\end{array}
$$

523

512

011

Verification

Dividend = Divisor × Quotient + Remainder

= 118 × 64 + 11 = 7552 + 11

= 7563 (Dividend)

(d) 8950 ÷ 20

44

20)8950

80

095

80

150

140

10

Verification

Dividend = Divisor × Quotient + Remainder

= 447 × 20 + 10 = 8940 + 10

= 8950 (Dividend)

(e) 9327 ÷ 34

274

34)9327

68

352

238

0147

136

011

Verification

Dividend = Divisor × Quotient + Remainder

= 34 × 274 + 11 = 9316 + 11

= 9327 (Dividend)

(f) 9075 ÷ 80

80) 9075 (113

80

107

80

275

240

035

Quotient = 113 Remainder = 35

Verification

Dividend = Divisor × Quotient + Remainder

= 80 × 113 + 35

= 9040 + 35

= 9075 (Dividend)

(g) 648 ÷ 24

24) 648 (27

48

168

168

00

Quotient = 27 Remainder = 0

Verification

Dividend = Divisor × Quotient + Remainder

= 24 × 27 + 0

= 648 (Dividend)

(h) 464 ÷ 58

58) 464 (8

464

000

Quotient = 8 Remainder = 0

Verification

Dividend = Divisor × Quotient + Remainder

= 58 × 8 + 0

= 464 (Dividend)

(i) $720 \div 45$

$$
\begin{array}{r}
16 \\
45\overline{)720} \\
45 \\
270 \\
270
\end{array}
$$

Quotient = 16 Remainder = 0

Verification

Dividend = Divisor × Quotient + Remainder

$= 45 \times 16 + 0 = 720$

Beat the Clock

(a) $135 \div \underline{15} = 9$ (b) $112 \div \underline{7} = 16$

(c) $54 \div \underline{3+6} = 16$ (d) $153 \div \underline{\underline{9}} = 17$

(e) $117 \div \underline{9} = 13$ (f) $152 \div \underline{8} = 19$

Mental Maths

1. Do yourself
2. (a) Yes (b) Yes (c) No
   (d) No (e) Yes

Ex. 4.5

1. Students in 23 rows = 2346

Students in each row = $234 \div 23$

$$
\begin{array}{r}
102 \\
23\overline{)2346} \\
\underline{23} \\
0046 \\
\underline{46} \\
00
\end{array}
$$

∴ There are 102 Students in each row.

2. Larger 4 digit number = 9999

Largest 3 digit number = 999

$$
\begin{array}{r}
10 \\
999\overline{)9999} \\
999 \\
\hline
0009 \\
0 \\
\hline
9
\end{array}
$$

Quotient = 10 Remainder = 9

Verification

Dividend = Divisor × Quotient + Remainder

= 999 × 10 + 9

= 9990 + 9 = 9999

3. Dividend = Divisor × Quotient + Remainder

= 68 × 75 + 39 = 5100 + 39

= 5139 (Dividend)

∴ The number is 5139

4. Cartons of apples in a trucks = 15675

∴ Cartons in 1 truck = 15675 ÷ 19

$$
\begin{array}{r}
825 \\
19\overline{)15675} \\
\underline{152} \\
0047 \\
\underline{38} \\
95 \\
\underline{95} \\
00
\end{array}
$$

∴ 825 cartoons are there in each truck.

5. Total sentences = 14118

Number of sentences in each page = 39

∴ Number of pages in the book = 14118 ÷ 39

```
      362
  39 )14118
      117
      241
      234
       78
       78
       00
```

∴ The book has 362 pages

6. Product of 2 numbers = 35640

One numbers = 216

```
      165
  216 )35640
      216
      1404
      1296
      01080
      1080
      000
```

∴ The other number = 165

7. Greatest number of 6 digits = 999999

Largest number of 2 digits = 99

```
      1010
  99 )999999
      99
      0099
      99
      0099
      99
      00
```

Quotient = 10101 Remainder = 0

8.

$$
\begin{array}{r}
213 \\
84\overline{)17915} \\
\underline{168} \\
0111 \\
\underline{84} \\
275 \\
\underline{252} \\
23
\end{array}
$$

23 Should be subtracted from 17915

So that the remaining number is exactly divisible by 84

9.

$$
\begin{array}{r}
226 \\
214\overline{)48539} \\
\underline{428} \\
0573 \\
\underline{428} \\
1459 \\
1284 \\
\underline{175} \\
214 \\
-\ 175 \\
\underline{039}
\end{array}
$$

39 should be added to 48539 to make it exactly divisible by 214.

10. 10000

Sum up

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

2. (a) $2760 \div 20 = 138$ (b) $1591 \div 37 = 43$

(c) $2640 \div 24 = 110$ (d) $3842 \div 34 = 113$

(e) $8400 \div 40 = 210$ (f) $1602 \div 18 = 89$

3. (a) 324×20

$324 \times 20 = 6480$

(b) 324×22

$$
\begin{array}{r}
648 \\
6480 \\
\hline
7128
\end{array}
$$

(c) 324×30

$$\begin{array}{r} 000 \\ 9720 \\ \hline 9720 \end{array}$$

(d) 324×203

$$\begin{array}{r} 648 \\ 0000 \\ \hline 64800 \\ \hline 65772 \end{array}$$

(e) 324×33

$$\begin{array}{r} 324 \\ \times 33 \\ \hline 1972 \\ 9720 \\ \hline 10692 \end{array}$$

(f) 324×302

$$\begin{array}{r} 324 \\ \times 302 \\ \hline 648 \\ 0000 \\ 97200 \\ \hline 97848 \end{array}$$

4. (a) 734210 by 39

$$\begin{array}{r} 18825 \\ 39\overline{)734210} \\ 39 \\ \hline 344 \\ 312 \\ \hline 0322 \\ 312 \\ \hline 0101 \\ 78 \\ \hline 23 \\ 195 \\ \hline 35 \end{array}$$

Verification

Dividend = Divisor × Quotient + Remainder

$= 39 \times 18825 + 35$

$= 734175 + 35$

$= 734210$

Quotient = 18825 Remainder = 35

(b) 575651 by 22

$$\begin{array}{r} 26165 \\ 22\overline{)575651} \\ 44 \\ \hline 135 \\ 132 \\ \hline 36 \\ 22 \end{array}$$

145
132
0131
110
021

Quotient = 26165 Remainder = 21

Verification

Dividend = Divisor × Quotient + Remainder

= 22 × 26165 + 21 = 575630 + 21

= 575651 (Dividend)

(c) 309425 by 64

4834

64)309425

256

0534

512

0222

192

305

256

049

Verification

Dividend = Divisor × Quotient + Remainder

= 64 × 4834 + 49

= 309376

= 309425 (Dividend)

(d) 317854 by 78

Verification

4075

78)317854

312

00585

546

0394

390

004

Dividend = Divisor × Quotient + Remainder

= 78 × 4075 + 4

= 317850 + 4

= 317854

(e) 540692 by 82

```
    6593
82)540692
   492
   0486
    410
    0769
     738
     0312
      246
       66
```

Verification

Dividend = Divisor × Quotient + Remainder

= 6593 × 82 + 66

= 540626 + 66

= 540692 (Dividend)

(f) 626752 by 11

```
    56977
11)626752
   55
   076
   66
    107
     99
      85
      77
       82
       77
       5
```

Verification

Dividend = Divisor × Quotient + Remainder

= 11 × 56977 + 5

= 626747 + 5

= 626752 (Dividend)

(g) 318431 by 27

```
    11793
27)318431
   27
   48
   27
```

214
189
0253
243
0101
81
20

Verification

Dividend = Divisor × Quotient + Remainder

= 27 × 11793 + 20

= 318411 + 20

= 318431 (Dividend)

(h) 997654 by 87

11467

87) 997654

87
127
87
406
348
585
522
0634
609
25

Verification

Dividend = Divisor × Quotient + Remainder

= 11467 × 87 + 25

= 997629 + 25

= 997654 (Dividend)

(i) 856000 by 22

38909

22) 856000

66
196
176
0200
198
200
198
2

Verification

Dividend = Divisor × Quotient + Remainder

= 38909 × 22 + 2

= 855998 + 2

= 856000 (Dividend)

(j) Bolts in one packet = 68

Total bolts = 349384

$\therefore$ Number of packets = $349384 \div 68$

$$
\begin{array}{r}
5138 \\
68\overline{)349384} \\
\underline{340} \\
0093 \\
\underline{68} \\
258 \\
204 \\
0544 \\
544 \\
\underline{000}
\end{array}
$$

$\therefore$ 5138 packets are required.

Ex. 5.1

1. (a) 2, 3, 17, 19, 23 (b) 29, 41, 37, 53, 43

(c) 97, 101, 13, 7

2. (a) 40

$1 \times 40 = 40$ $2 \times 20 = 40$

$4 \times 10 = 40$ $5 \times 8 = 40$

Factors of 40 = 1, 2, 4, 5, 8, 10, 20, 40

(b) 77

$1 \times 77 = 77$ $7 \times 11 = 77$

Factors of 77 = 1, 7, 11, 77

(c) 80

$1 \times 80 = 80$ $2 \times 40 = 80$

$4 \times 20 = 80$ $5 \times 16 = 80$

$8 \times 10 = 80$

Factors of 80 = 1, 2, 4, 5, 8, 10, 16, 20, 40, 80

(d) 100

$1 \times 100 = 100$ $2 \times 50 = 100$

$4 \times 25 = 100$ $5 \times 20 = 100$

$10 \times 10 = 100$

Factors of 100 = 1, 2, 4, 5, 10, 20, 25, 50, 100

(e) 61

$1 \times 61 = 61$

Factors of 61 = 1, 61

3. (a) 50

$50 \div 1 = 50$ $50 \div 2 = 25$

$50 \div 5 = 10$

Factors of 50 = 1, 2, 5, 10, 25, 50

(b) 56

$56 \div 1 = 56$ $56 \div 2 = 28$

$56 \div 4 = 14$ $56 \div 7 = 8$

Factors of 56 = 1, 2, 4, 7, 8, 14, 28, 56

(c) 144

$144 \div 1 = 144$ $144 \div 2 = 72$

$144 \div 3 = 48$ $144 \div 4 = 36$

$144 \div 6 = 24$ $144 \div 8 = 18$

$144 \div 9 = 16$ $144 \div 12 = 12$

Factors of 108 = 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72, 144

(d) 89

$89 \div 1 = 89$

Factors of 89 = 1, 89

(e) 108

$108 \div 1 = 108$ $108 \div 2 = 54$

$108 \div 3 = 36$ $108 \div 4 = 27$

$108 \div 9 = 12$

Factors of 108 = 1, 2, 3, 4, 9, 12, 27, 36, 54, 108

4. (a) 11, 5

Product = $11 \times 5 = 55$ Factors of 55 = 1, 5, 11

(b) 12×15

Product = $12 \times 15 = 180$

Factors of 180 = 1, 2, 3, 4, 5, 6, 9, 10, 12, 15, 18, 20, 30, 36, 45, 60, 90, 180

(c) 14, 12

Product = $12 \times 14 = 168$

Factors of 168 = 1, 2, 3, 4, 6, 7, 8, 12, 14, 21, 24, 28, 42, 56, 84, 168

(d) 8, 12

Product = $8 \times 12 = 96$

Factors of 96 = 1, 2, 3, 4, 6, 8, 12, 16, 24, 32, 48, 96

5. (a)

```
    15
3)45
   3
   15
   15
   00
```

Yes 3 is a factor of 45

(b)

```
   9
9)85
  81
   4
```

No, 9 is not a factor of 85

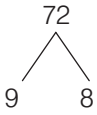
(c)

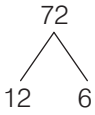
```
    5
23)115
   115
   000
```

Yes 23 is a factor of 115

6. (a) True (b) False (c) True (d) Flase

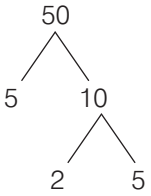
(e) Flase (f) True (g) True

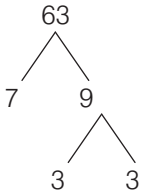


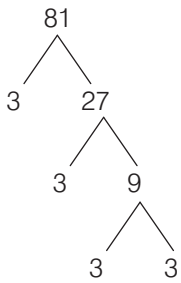


Ex. 5.2

1.

(a)


(b)


(c)


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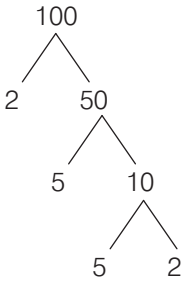
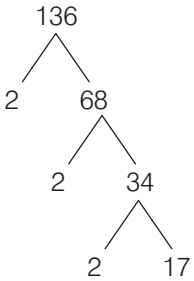


(e)


2. (a) 7, 14

$7 \rightarrow 1, 7$; $14 \rightarrow 1, 2, 7, 14$

Common factor 1, 7

(b) 30, 36

$30 \rightarrow 1, 2, 3, 5, 6, 10, 15, 30$; $36 \rightarrow 1, 2, 3, 4, 6, 9, 12, 18, 36$

Common factor $\rightarrow$ 1, 2, 3, 6

(c) 21, 15

$21 \rightarrow 1, 3, 7, 21$

$15 \rightarrow 1, 3, 5, 15$ Common factor $\rightarrow$ 1, 3

(d) 12, 20

$12 \rightarrow 1, 2, 3, 4, 6, 12$; $20 \rightarrow 1, 2, 4, 5, 10, 20$

Common factor $\rightarrow$ 1, 2, 4

(e) 15, 18

$15 \rightarrow 1, 3, 5, 15$; $18 \rightarrow 1, 2, 3, 6, 9, 18$

Common factor $\rightarrow$ 1, 3

Ex. 5.3

1. (a) 8

First 5 multiples of 8 = 8, 16, 24, 32, 40

(b) 6

First 5 multiples of 6 = 6, 12, 18, 24, 30

(c) 12

First 5 multiples of 12 = 12, 24, 36, 48, 60

(d) 14

First 5 multiples of 14 = 14, 28, 42, 56, 70

(e) 15

First 5 multiples of 15 = 15, 30, 45, 60, 75

2. (a) 24, 48, 72, 96, 120, 144 (b) 50, 100, 150, 200, 250, 300

(c) 14, 28, 42, 56, 70, 84 (d) 16, 32, 48, 64, 80, 96

(e) 9, 18, 27, 36, 45, 54 (f) 17, 34, 51, 68, 85, 102

3. (a) False (b) True (c) True (d) False

(e) False (f) True (g) True

Ex. 5.4

1. Total students = 34

$34 = 1 \times 2 \times 17$

Groups formed can be 1, 2, 17

2. $55 = 1 \times 5 \times 11$,

Number of piles can be 1, 5, 11

3. 80

Factors of 80 = 1, 2, 4, 5, 8, 10, 16, 20, 40

Number of bulks that can be made.

1, 2, 4, 5, 8, 10, 16, 20, 40

4. Factors of 36 → 1, 2, 3, 4, 6, 9, 12, 18

1, 2, 3, 4, 6, 9, 12, 18 batches can be made

5. Factors of 50 → 1, 2, 5, 10, 25, 50

∴ Mangoes can be arranged in groups of 1, 2, 5, 10, 25, 50 in the basket

Sum up

1. (a) (iii) (b) (ii) (c) (ii)

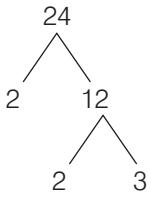
2. (a) 4, 6 (b) 3, 9 (c) 40 (d) $6 \times 9 = 54$

(e) Factor (f) Multiple

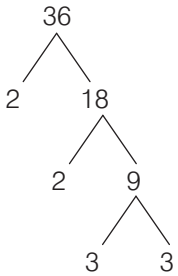
3. (a) 24, 30, 36 (b) 100, 125, 150 (c) 20, 25, 30

(d) 32, 40, 48

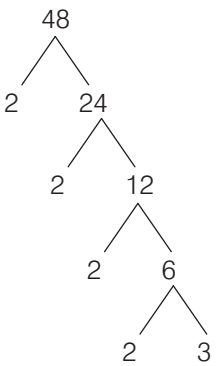
4. (a) 24



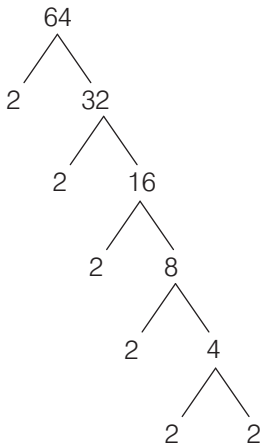
(b) 36



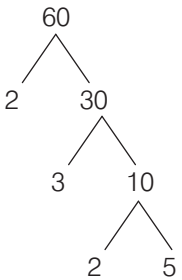
(c) 48



(d) 64



(e) 60



5. (a) 24

1×24

2×12

3×8 Factors of $24 \rightarrow 1, 2, 3, 8, 12, 24$

(b) 12

1×12

2×6

3×4 Factors of $12 \rightarrow 1, 2, 3, 4, 6, 12$

(c) 20

1×20

2×10

4×5 Factors of $20 \rightarrow 1, 2, 4, 5, 10, 20$

(d) 36

1×36

2×18

3×12

4×9

6×6 Factors of $36 = 1, 2, 3, 4, 6, 9, 12, 18, 36$

(e) 28

1×28

2×14

4×7 Factors of $28 \rightarrow 1, 2, 4, 7, 14, 28$

6. (a) 100

$100 \div 1 = 100$ $100 \div 2 = 50$

$100 \div 4 = 25$ $100 \div 5 = 20$

$100 \div 10 = 10$

Factors of $100 = 1, 2, 4, 5, 10, 20, 25, 50, 100$

(b) 45

$45 \div 1 = 45$ $45 \div 3 = 15$

$45 \div 5 = 9$

Factors of $45 = 1, 3, 5, 9, 15, 45$

(c) 36

$36 \div 1 = 36$ $36 \div 2 = 18$

$36 \div 3 = 12$ $36 \div 4 = 9$

$36 \div 6 = 6$

Factors of 36 = 1, 2, 3, 4, 6, 9, 12, 18, 36

(d) 64

$64 \div 1 = 64$ $64 \div 2 = 32$

$64 \div 4 = 16$ $64 \div 8 = 8$

Factors of 64 = 1, 2, 4, 8, 16, 32, 64

(e) 78

$78 \div 1 = 78$ $78 \div 2 = 39$

$78 \div 3 = 26$ $78 \div 6 = 13$

Factors of 78 = 1, 2, 3, 6, 13, 26, 39, 78

Ex. 6.1

Do yourself

Ex. 6.2

1.

	Fraction	Numerator	Denominator
(a)	$\frac{1}{4}$	1	4
(b)	$\frac{1}{2}$	1	2
(c)	$\frac{2}{3}$	2	3
(d)	$\frac{1}{3}$	1	3
(e)	$\frac{3}{4}$	3	4
(f)	$\frac{4}{5}$	4	5

2. $\frac{7}{8}, \frac{3}{4}, \frac{5}{6}, \frac{2}{9}, \frac{3}{7}, 3$

3. (a) Seven by eight

(b) One by five

(c) Two by five

(d) Three by five

(e) Three by seven

(f) Three by four

(g) Two by seven

4. (a) $\frac{6}{9}$ (b) $\frac{3}{7}$

(c) $\frac{5}{9}$ (d) $\frac{4}{8}$

Ex. 6.3

1. (a) $5\frac{9}{13}$

$$\frac{(13\times 5)+9}{13} = \frac{65+9}{13} = \frac{74}{13}$$

(b) $8\frac{2}{15}$ $= \frac{(15\times 8)+2}{15}$

$$= \frac{120+2}{15} = \frac{122}{15}$$

(c) $10\frac{11}{12} = \frac{(10\times 12)+11}{12} = \frac{120+11}{12} = \frac{131}{12}$

(d) $4\frac{3}{8} = \frac{(4\times 8)+3}{8} = \frac{32+3}{8} = \frac{35}{8}$

(e) $7\frac{3}{12}\ \frac{(7\times 12)+3}{12} = \frac{84+3}{12} = \frac{87}{12}$

(f) $4\frac{7}{9}\ \frac{(4\times 9)+7}{9} = \frac{36+7}{9} = \frac{43}{9}$

2. (a) Mixed fraction (b) Improper fraction

(c) Unit fraction (d) Proper fraction

(e) Unit fraction (f) Improper fraction

3. (a) $\frac{9}{11}$ (b) $\frac{2}{19}$ (c) $\frac{5}{16}$ (d) $\frac{5}{31}$

4. (a) $\frac{2}{9}, \frac{7}{9}$ (b) $\frac{8}{15}, \frac{7}{15}, \frac{3}{15}$ (c) $\frac{9}{17}, \frac{8}{17}$ (d) $\frac{11}{17}, \frac{15}{17}$

(e) $\frac{8}{21}, \frac{4}{21}$ (f) $\frac{2}{13}, \frac{5}{13}, \frac{7}{13}$

5. (a) $\frac{4}{9}, \frac{5}{9}, \frac{6}{9}, \frac{7}{9}$ (b) $\frac{3}{10}, \frac{4}{10}, \frac{5}{10}, \frac{6}{10}$

(c) $\frac{8}{21}, \frac{9}{21}, \frac{10}{21}, \frac{11}{21}$ (d) $\frac{7}{12}, \frac{8}{12}, \frac{9}{12}, \frac{10}{12}$

Mental Maths

1. $\frac{2}{5}, \frac{3}{7}, \frac{16}{21}, \frac{5}{9}$ **2.** $2\frac{1}{12}, 3\frac{2}{9}, 4\frac{7}{8}$

Beat the Clock

$$9\frac{13}{5} = \frac{(9\times 5)+13}{5}$$

$$= \frac{45+13}{5} = \frac{58}{5}$$

Ex. 6.4

1. (a) $\frac{11}{12}, \frac{5}{6}$

$11\times 6, 12\times 5$

$66 > 60$

$\therefore \frac{11}{12} > \frac{5}{6}$

(b) $\frac{5}{16}, \frac{3}{10}$

$5\times 10, 16\times 3$

$50, 48$

$50 > 48$

$\therefore \frac{5}{16} > \frac{3}{10}$

(c) $\frac{4}{5}, \frac{8}{10}$

$4\times 10, 5\times 8$

$40 = 40$

(d) $\frac{5}{13}, \frac{2}{11}$

$11\times 5, 13\times 2$

$55 > 26$

$\frac{4}{5} = \frac{8}{10}$

$\frac{5}{13} > \frac{2}{11}$

(e) $\frac{1}{5}, \frac{9}{16}$

$16 \times 1,\ 9 \times 5$

$16 < 45$

$\frac{1}{5} < \frac{9}{16}$

(f) $\frac{20}{7}, \frac{18}{9}$

$20 \times 9, 18 \times 7$

$180 > 126$

$\frac{20}{7} > \frac{18}{9}$

2. (a) $3\frac{1}{3} = \frac{10}{3}$

$\frac{10}{3} = \frac{10}{3}$

$\therefore$ False

(b) $\frac{19}{5}, \frac{20}{6}$

$19 \times 6,\ 20 \times 5$

$114,\ 100$

$114 > 100$

$\therefore \frac{19}{5} > \frac{20}{6}$

True

(c) $\frac{40}{7} = 5\frac{5}{7}$

$\frac{40}{7} = \frac{40}{7}$

True

(d) $\frac{5}{9}, \frac{4}{8}$

$8 \times 5,\ 9 \times 4$

$40 > 36$

$\frac{5}{9} > \frac{4}{8}$ True

(e) $\frac{9}{11}, \frac{5}{9}$

$9 \times 9, 11 \times 5$

$81 > 55$

False

(f) $\frac{51}{10} = 5\frac{1}{10}$

$\frac{51}{10} > \frac{51}{10}$

False

Ex. 7.1

Do yourself

Mental Maths

140 cm = 1 m 40 cm; 5 m 35 cm = 535 cm

147 cm = 1 m 47 cm; 9 m 51 cm = 951 cm

249 cm = 2 m 49 cm; 6 m 8 cm = 608 cm

Ex. 7.2

1. (a) 400 cm (b) 900 cm (c) 820 cm (d) 850 cm

(e) 1000 cm (f) 195 cm (g) 524 cm (h) 245 cm

2. (a) 6 m 40 cm (b) 4 m 20 cm

(c) 1 m 7 cm (d) 5 m 67 cm

(e) 9 m 72 cm (f) 9 m 80 cm

(g) 1 m 25 cm (h) 1 m 8 cm

Ex. 7.3

1. (a) 8000 m (b) 6500 m (c) 4500 m (d) 9500 m

(e) 7000 m (f) 3500 m (g) 5000 m (h) 4000 m

2. (a) 7 km (b) 1 km 340 m (c) 9 km 7 m (d) 5 km 90 m

(e) 2 km 760 m (f) 5 km (g) 7 km 800 m

(h) 6 km 450 m

3. Distance travalled by Anuska = 3 km × 2

= 6 km = 6 × 1000 m

= 6000 m

Ans = 6000 m

4. Length of graden = 150 m

Distance covered in 8 rounds = 150 × 8

= 1200 m = 1 km 200 m

Ans = 1 km 200 m

3. (a) $\frac{4}{13} < \frac{5}{13} < \frac{7}{13} < \frac{8}{13} < \frac{9}{13}$ (b) $\frac{8}{21} < \frac{10}{21} < \frac{13}{21} < \frac{15}{21} < \frac{17}{21}$

(c) $\frac{12}{23} < \frac{15}{23} < \frac{16}{23} < \frac{17}{23} < \frac{18}{23}$ (d) $\frac{5}{12} < \frac{7}{12} < \frac{8}{12} < \frac{9}{12} < \frac{10}{12}$

(e) $\frac{15}{24} < \frac{15}{20} < \frac{15}{19} < \frac{15}{18} < \frac{15}{16}$

4. (a) $\frac{19}{20} > \frac{18}{20} > \frac{14}{20} > \frac{12}{20} > \frac{11}{20}$ (b) $\frac{25}{27} > \frac{21}{27} > \frac{19}{27} > \frac{16}{27} > \frac{15}{27}$

(c) $\frac{18}{17} > \frac{18}{19} > \frac{18}{21} > \frac{18}{23} > \frac{18}{25}$ (d) $\frac{15}{17} > \frac{15}{20} > \frac{15}{28} > \frac{15}{29} > \frac{15}{41}$

Sum up

1. $\frac{9}{10}, \frac{18}{20}, \frac{27}{30}, \frac{36}{40}$ **2.** $\frac{2}{3}, \frac{4}{7}, \frac{6}{7}, \frac{8}{7}$

3. (a) $5\frac{1}{6} = \frac{31}{6}$ (b) $11\frac{10}{13} = \frac{153}{3}$

4. (a) $\frac{44}{132} = \frac{1}{3}$ (b) $\frac{65}{260} = \frac{1}{4}$

5. (a) $\frac{19}{20} > \frac{19}{27} > \frac{19}{29} > \frac{19}{30} > \frac{19}{38}$

(b) $\frac{17}{43} < \frac{19}{43} < \frac{21}{43} < \frac{34}{43}, \frac{38}{43}$

6. (a) $\frac{8}{13}, \frac{5}{7}$

$7 \times 8, 13 \times 5$

$56 < 65$

$\frac{8}{13} < \frac{5}{7}$

(b) $\frac{3}{8}, \frac{6}{16}$

$16 \times 3, 6 \times 8$

$48 = 48$

$\therefore \frac{3}{8} = \frac{8}{16}$

(c) $\frac{10}{11}, \frac{9}{13}$

$13 \times 10, 11 \times 9$

$130 > 99$

$\frac{10}{11} > \frac{9}{13}$

(d) $\frac{5}{21}, \frac{13}{42}$

$42 \times 5, 21 \times 13$

$210 < 273$

$\frac{5}{21} < \frac{13}{42}$

Ex. 7.4

1. Lace required = Perimeter of the board.

Lace required = 42 + 30 + 42 + 30

= 144 cm = 1 m 44 cm

2. (a) Perimeter = Sum of length of a 11 dies

= 1 + 1 + 2 + 2 + 3 + 3 + 1 + 1 + 4 + 4 = 22 cm

(b) Perimeter = 3 + 9 + 6 = 12 + 6 = 18 cm

(c) Perimeter = 2 + 2 + 2 + 2 + 3 + 3 + 6 = 20 cm

(d) Perimeter = 5 + 5 + 1 + 1 + 1 + 1 +2 + 2 + 2 + 2 + 5 + 5

= 32 cm

(e) Perimeter = 5 + 5 + 2 + 2 = 14 cm

(f) Perimeter = 7 + 7 + 3 + 3 = 14 = 20 cm

(g) Perimeter = 8 + 8 + 4 + 4 = 24 cm

3. Do yourself **4. Do yourself**

Beat the Clock

Do yourself

Ex. 7.5

1. (a) 7000 ml (b) 6500 ml (c) 4000 ml (d) 3500 ml

(e) 5000 ml (f) 19500 ml (g) 8500 ml (h) 17000 ml

2. (a) 3 l 500 ml (b) 6 l 240 ml (c) 4 l 500 ml

(d) 7 l 500 ml (e) 5 l 250 ml (f) 9 l 580 ml

(g) 2 l 670 ml (h) 8 l 765 ml

3. Capacity each vessels = 400 ml

Capacity of bottle = 400 × 5 = 2000 ml = 2 l

∴ Capacity of bottle = 2 l

4. Capacity of Jar = 3 l 500 ml

Capacity of glass = 500 ml

∴ Number of glasses = 3500 ÷ 500 ∴ 7 glasses can be filled.

5. Capacity of 1 bottel = 500 ml

∴ Capacity of 5 bottles = 500 × 5 = 2500 ml = 2 l 500 ml

∴ 2 l 500 ml milk can be filled in 5 bottles

6. Total milk = 2 l = 2000 ml

Quantity each friend get = 2000 ÷ 10 = 20 ml

∴ Each friend got 200 ml of milk

Ex. 7.6

1. (a) 3000 g (b) 3500 g (c) 9000 g (d) 2250 g

(e) 4000 g (f) 1500 g (g) 8250 g (h) 4250 g

2. (a) 3 kg 600 g (b) 4 kg 200 g (c) 9 kg 280 g

(d) 3 kg 700 g (e) 1 kg 400 g (f) 2 kg 710 g

(g) 7 kg 890 g (h) 5 kg 470 g

Sum up

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

2. (a) (v) (b) (iv) (c) (i) (d) (iii) (e) (ii)

3. (a) 630 m = 6 m 30 cm (b) 7 m 25 cm = 725 cm

(c) 8420 kg = 8 kg 420 g (d) 8 km 500 m = 8500 m

4. Do yourself

5. Capacity of each glass = 250 ml

Number of glasses = 7

∴ Total milk = 250 × 7 = 1750 ml = 1l 750 ml

Ans = 1 l 750 ml

6. Capacity of 1 cup = 75 ml.

Number of cups required to = 900 ÷ 75

hold 900 ml

$$
\begin{array}{r}
12 \\
75\overline{)900} \\
\underline{75} \\
150 \\
\underline{150} \\
000
\end{array}
$$

Ans = 12 cups

7. Cost of 5 kg of peas = ₹ 200

Cost of 1 kg = 200 ÷ 5

$$5\overline{)200}\ 40$$

$$\begin{array}{r} 20 \\ \hline 000 \end{array}$$

∴ cost of 1 kg = ₹ 40

8. Capacity of 1 bottle = 300 ml

Capacity of 5 bottles = 300 × 5

= 150 ml = 1 l 500 ml

5 bottles can hold 1 l 500 ml of Juice

9. Weight of one packet of rice = 150 g

Number of packets required to make 3 kg = 3000 ÷ 150

3 kg = 3000 g

$$150\overline{)3000}\ 20$$

$$\begin{array}{r} 300 \\ \hline 000 \end{array}$$

∴ 20 packets will be needed to make 3 kg

CHAPTER 08

Ex. 8.1

1. Do yourself

2. (a) Perimeter = 9 + 9 + 12 + 12 = 18 + 24 = 42 cm

(b) Perimeter = 13 + 13 + 5 + 5 = 26 + 10 = 36 cm

(c) Perimeter = 5 + 5 + 9 + 9 = 10 + 18 = 28 cm

(d) Perimeter = 4 + 4 + 4 = 12 cm

(e) Perimeter = 3 + 3 + 5 = 6 + 5 = 11 cm

(f) Perimeter = 8 + 8 + 5 + 5 = 16 + 10 = 26 cm

3. Do yourself

4. (a) Perimeter $= 2+3+1+1+1+\frac{1}{2}+\frac{1}{2}+\frac{1}{2}$

$= 9+\frac{1}{2} = 9\frac{1}{2}$ units

(b) Perimeter $= 1+1+4+3+2 = 11$ units

(c) Perimeter $= 1+4+1+1\frac{1}{2}+1\frac{1}{2}+3+3+1$

$= 15+1 = 16$ units

Beat the Clock

(a) 15 cm (b) 114 cm (c) 53 cm

(d) 47 cm

Mental Maths

Do yourself

Ex. 8.2

1. (a) Perimeter of square $= 64+64+64+64 = 256$ cm

(b) Perimeter of square $= 34+34+34+34 = 136$ cm

(c) Perimeter of square $= 92+92+92+92 = 368$ cm

(d) Perimeter of square $= 17+17+17+17 = 68$ cm

2. (a) Perimeter of triangle $= 13+14+15 = 42$ cm

(b) Perimeter of triangle $= 12+12+12 = 36$ cm

(c) Perimeter of triangle $= 6+8+12 = 26$ cm

(d) Perimeter of triangle $= 12+20+18 = 50$ cm

3. (a) Perimeter of rectangle $= 2(l+b)$

$= 2(31+16) = 2(47) = 94$ cm

(b) Perimeter of rectangle $= 2(l+b) = 2(20+10) = 2(30)$

$= 60$ cm

4. (a) Perimeter of rectangle $= 80$

length $= 28$

$\therefore$ Breadth $= ?$

Perimeter of rectangle $= 2(l+b)$

$80 = 2(l+b)$

$$80 = 2(28 + b)$$

$$\frac{80}{2} = 28 + b$$

$$40 - 28b;\ b = 12\ \text{cm}$$

(b) Perimeter = 230 cm

Breadth = 50 cm

length = ?

Perimeter of rectangle = $2(l + b)$

$$230 = 2(l + 50)$$

$$\frac{230}{2} = l + 50$$

$$115 = l + 50$$

$$115 - 50 = l$$

$$l = 65\ \text{cm}$$

(c) Perimeter = 268

length = 84 cm

Breadth = ?

Perimeter of rectangle = $2(l + b)$

$$268 = 2(84 + b)$$

$$\frac{268}{2} = 84 + b;\ 134 = 84 + b$$

$$134 - 84 = b$$

Breadth = 50 cm

(d) Perimeter = 360 cm

length = ?

Breadth = 80 cm

Perimeter of rectangle = $2(l + b)$

$$360 = 2(l + 80)$$

$$\frac{360}{2} = l + 80$$

$$180 = l + 80$$

$$100 + l$$

$$l = 100$$

$\therefore$ length = 100 cm

(e) Perimeter = ?

length = 76 cm

Breadth = 47 cm

Perimeter = $2(l + b)$

$= 2(76 + 47) = 2(123) = 246$ cm

Beat the Clock

Do yourself

Ex. 8.3

1. Do yourself

2. (a) 12 sq. cm. (b) 5 sq. cm. (c) 15 sq. cm.
(d) 12 sq. cm.

3. (a) 16 sq. cm. (b) 8 sq. cm. (c) 23 sq. cm. (d) 12 sq. cm.

4. (a) 5 sq. cm. (b) 6 sq. cm. (c) 7 sq. cm. (d) 5 sq. cm.
(e) 3 sq. cm. (f) 8 sq. cm. (g) 6 sq. cm. (h) 9 sq. cm.
(i) 7 sq. cm. (j) 9 sq. cm.
Biggest - (h) (j)
Smallest (e)

5. M = 12 sq. units A = 13 sq. units
T = 7 sq. units H = 12 sq. units
S = 10 sq. units
Total area of the word MATHS = 54 sq. units.

6. (a) 10 sq. cm. (b) 8 sq. cm. (c) 4 sq. cm.

7. (a) 8 sq. cm. (b) 9 sq. cm. (c) 9 sq. cm.

Ex. 8.4

1. (a) Area = $L \times B = 55 \times 22 = 1210\ \text{cm}^2$ or sq. cm.
(b) Area = $L \times B = 38 \times 16 = 608\ \text{cm}^2$ or sq. cm.
(c) Area = $L \times B = 18 \times 10 = 180\ \text{cm}^2$ or sq. cm.

(d) Area $= 14 \times 3 = 42\,\text{cm}^2$ or sq. cm.

2. (a) Area of Square = Side × Side $= 17 \times 17 = 289\,\text{cm}^2$ or sq. cm.

(b) Area of square $= 88 \times 88 = 7744\,\text{m}^2$ or sq. m.

(c) Area of square $= 14 \times 14 = 196\,\text{m}^2$ or sq. m.

(d) Area of square $= 22 \times 22 = 484\,\text{cm}^2$ or sq. m.

3. Area of flag $= (15 \times 4) + (1.5 \times 14) = 60 + 21 = 81$ sq. cm.

4. Area of rectangular floor $= L \times B$

$= 10 \times 12 = 120 = 120$ sq. m. or m^2

5. Breadth of rectangular plot = 25 m

Length of rectangular plot $= (25 + 7)\,\text{m} = 32\,\text{m}$

$\therefore$ Area $= L \times B = 32 \times 25$

Area $= 800\,\text{m}^2$ or sq. m.

6. Side of square = 68 cm.

$\therefore$ Area of Square = Side × Side $= 68 \times 68 = 4624\,\text{cm}^2$ or sq. cm.

7. Breadth of rectangular plot = 18 cm

Length of plot $= (18 + 2) = 20$ cm

$\therefore$ Area of rectangular plot $= L \times B = 20 \times 18 = 360$ sq. cm. or cm^2

8. Area of Square Park = Side × Side $= 15 \times 15 = 225$ sq. cm. or cm^2

Sum up

1. (a) (iv) (b) (ii) (c) (ii)

2. (a) 9 (b) 20 (c) 28 (d) 18

3. (a) Perimeter $= 5 + 4 + 6 = 5 + 10 = 15$ cm

(b) Perimeter $4 + 2 + 3 + 7 + 5 = 21$ cm

(c) Perimeter $= 8 + 8 + 3 + 3 = 16 + 6 = 22$ cm

(d) Perimeter $= 2 + 2 + 2 + 2 + 4 + 4 = 16$ cm

4. Length of rectangle = 22 cm; Breadth of rectangle = 20 cm

Perimeter of rectangle $= 2(L + B) = 2(22 + 20) = 2(42) = 84$ cm

Area of rectangle $= L \times B = 22 \times 20 = 440$ sq. cm.

5. Perimeter of triangle $= 24 + 26 + 10 = 60$ cm

6. Side of square = 25 cm

Area of square = Side × Side $= 25 \times 25 = 625$ sq. cm. or cm^2

Perimeter of square = 25 + 25 + 25 + 25 = 50 + 50 = 100 cm

7. Perimeter of triangle = 16 + 12 + 16 = 32 + 12 = 44 m.

8. Side of square = 50 cm

Perimeter of square = 50 + 50 + 50 + 50 = 200 cm

CHAPTER 09

Ex. 9.1

1. (a) O (b) O (c) C (d) C

(e) C (f) O (g) C (h) C

2. (c), (e), (g), (h)

Ex. 9.2

1. (a) False (b) True (c) False (d) True

2. (a) Hexagon (b) Rectangle (c) Pentagon (d) Square

(e) Triangle

3. Do yourself **4. Do yourself**

Mental maths

1. 10 × 2 = 20 cm

Diameter = 20 cm

2. 18 ÷ 2 = 9 cm

Radius = 9 cm

Ex. 9.3

1.

Circle	Diameter	Radius
(a)	8	4
(b)	4	2
(c)	10	5
(d)	12	6
(e)	6	3

2. (a) (i) Centre = O (ii) Diameter = PQ

(iii) Radius = OR (iv) Radius (v) Diameter

(b) (i) Centre = O (ii) Diameter = AB

(iii) Radius = OC (iv) OC = Radius (v) AB = diameter

3. Do yourself **4. Do yourself**

5. (a) Diameter (b) Half (c) Round (d) Radius

(e) Centre (f) Radii (g) Circumference (h) Centre

6. (a) $r = 25$ cm

$d = r \times 2$

$= 25 \times 2 = 50$ cm

(b) $r = 13$ m

$d = r \times 2$

$= 13 \times 2 = 26$ m

(c) $r = 7$ m

$d = r \times 2$

$= 7 \times 2$

$= 14$ m

(d) $r = 19$ m

$d = r \times 2$

$= 19 \times 2$

$= 38$ m

(e) $r = 10$ cm

$d = r \times 2$

$= 10 \times 2$

$d = 20$ cm

(f) $r = 15$ cm

$d = r \times 2$

$= 15 \times 2$

$d = 30$ cm

(g) $r = 3$ cm

$d = r \times 2$

$= 3 \times 2$

$d = 6$ cm

(h) $r = 5$ m

$d = r \times 2$

$= 5 \times 2$

$d = 10$ m

7. (a) $d = 34$ cm

$r = \frac{d}{2} = \frac{34}{2}$

$r = 17$ cm

(b) $d = 70$ cm

$d = \frac{d}{2} = \frac{70}{2}$

$r = 35$ cm

(c) $d = 56$ cm

$r = \frac{d}{2} = \frac{56}{2}$

$r = 28$ cm

(d) $d = 26$ cm

$r = \frac{d}{2} = \frac{26}{2}$

$r = 13$ cm

(e) $d = 20$ cm

$r = \frac{d}{2} = \frac{20}{2}$

$r = 10$ cm

(f) $d = 46$ cm

$r = \frac{d}{2} = \frac{46}{2}$

$r = 23$ cm

(g) $d = 12$ cm

$r = \frac{d}{2} = \frac{12}{2}$

$r = 6$ cm

(h) $d = 8$ cm

$r = \frac{d}{2} = \frac{8}{2}$

$r = 4$ cm

Ex. 9.4

Do yourself

Ex. 9.5

1. (a) True (b) True (c) False (d) False
(e) True (f) False (g) True (h) False

2. Do yourself **3.** Do yourself

Sum up

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

2. (b) (d)

3. (a) R (b) N (c) N (d) R

4. Diameter = 22 cm

$$\text{Radius} = \frac{d}{2} = \frac{22}{2} = 11 \text{ cm}$$

5. (a) Quadrilateral (b) Closed (c) Diameter
(d) Hexagon (e) Symmetrical

6. $r = 7$ cm; $d = r \times 2 = 7 \times 2$; $d = 14$ cm

Ex. 10.1

1. (a) 2 O' clock (b) 10:30 (c) 4:30 (d) 9 O' clock
(e) 6 O' clock (f) 8 O' clock (g) 1 O' clock
(h) 10 O' clock (i) 1:30

2. (a) 2:40 p.m., 1440 hours (b) 7:15, 1915 hours
(c) 8:45 p.m., 2045 hours (d) 1 p.m., 1330 hours
(e) 12:01 a.m., 00:01 hours (f) 4:45, 1645 hours
(g) 10:50 a.m., 1050 hours (h) 12:03 p.m., 1203 hours
(i) 5:30 p.m., 1730 hours (j) 7:30 a.m., 0730 hours

3. (a) 5:45 pm (b) 0645 hours (c) 2040 hours
(d) 1330 hours (e) Refreshment (f) 5 pm

Ex. 10.2

1. 3:40 to 4:00 = 20 minutes
4:00 to 5:00 = 1 hour

5:00 to 5:10 = 10 minutes 1 hour 30 minutes

The match lasted for 1 hour 30 minutes

2. 7:00 a.m. to 8:00 a.m. = 1 hour

8:00 a.m. to 8:20 a.m. = 20 minutes

1 hour 20 minutes

His journey took 1 hour 20 minutes

3. 10:30 a.m. to 11:00 a.m. = 30 minutes

11:00 a.m. to 12:00 p.m. = 1 hour

12:00 p.m. to 1:00 p.m. = 1 hour

1:00 p.m. to 2:00 p.m. = 1 hour

2:00 p.m. to 3:00 p.m. = 1 hour

3:00 p.m. to 4:00 p.m. = 1 hour

4:00 p.m. to 4:20 p.m. = 20 minutes

5 hours 50 minutes

The journey took 5 hours 50 minutes

4. Samita leaves home + 6:30 a.m.

Time taken to reach school = 40 minutes

6:30
40
7:10 She reaches school as 7:10 a.m.

5. Time film starts = 3:15 p.m.

duration of film = 2 hours 40 minutes

3:15
2:40
5:55 The show will end by 5:55 p.m.

6. Time bus leaves for shimla = 7:30 a.m.

Time taken to reach shimla = 9 hours

7:30
9:00
16:30

16:30 = 4:30 p.m.

The bus will reach shimla at 4:30 p.m. in the evening.

Ex. 10.3

1. (a) 365 days (b) 366 day (c) 3 years 7 months
(d) 35 week = 8 month 3 weeks

2. (a) True (b) False (c) False (d) True

3. Days is January = (31 – 7) = 24 days
Days in February = 24 days; Days in March = 2 days
Total days he was on leave 55 days
He was on leave for 55 days

4. Days in May = 31 – 9 = 22; Days in June = 11
She was in Mumbai for = 33 days
She was in Mumbai for 33 days

Mental Maths -

Do yourself

Sum up

1. (a) 50 (b) 45 (c) 30

2. (a) 15 minutes (b) 45 minutes (c) 15 minutes
(d) 30 minutes

3. (a) P.M. (b) A.M. (c) P.M. (d) P.M.
(e) A.M.

4. (a) One (b) 24 (c) 5

5. Days of September = 30 – 6 = 24
Day of October = 6; 30 days
∴ The fair lasted for 30 days.

6. Days of January = 31 – 15 = 16
Days of February = 9
$\overline{25}$ days
She was on leave for 25 days

CHAPTER 11

Beat the Clock

(a) 6745 p < ₹ 68 (b) < (c) <
(d) > (e) = (f) < (g) > (h) >

Ex. 11.1

1. (a) ₹ 12.94 (b) ₹ 85.09 (c) ₹ 76.32 (d) ₹ 504.11
(e) ₹ 69.96

2. (a) ₹ 29.16 (b) ₹ 429.16 (c) ₹ 56.20 (d) ₹ 542.42
(e) ₹ 65.88 (f) ₹ 340.40 (g) ₹ 350.05 (h) ₹ 692.09

3. (a) Rupees four hundred eighty nine and one paise
(b) Rupees seven hundred nine and three paise
(c) Rupees one hundred and eight and twenty paise
(d) Rupees twenty four and ninety paise
(e) Rupees twenty five and forty five paise

4. (a) 4536 (b) 85263 (c) 9020 (d) 26338
(e) 45656 (f) 80003 (g) ₹ 856.28 (h) ₹ 385.04
(i) ₹ 300.90 (j) ₹ 416.92

5. (a) 8345 P (b) 7898 P (c) 51253 P (d) 10810 P
(e) 210034 P (f) 92050 P (g) 78307 P (h) 18150 P

Ex. 11.2

1. (a)

₹	P
48	29
+ 78	63
126	92

(b)

₹	P
105	34
+ 28	76
134	10

(c)

₹	P
35	05
+ 69	98
105	03

(d)

₹	P
125	92
17	98
143	90

(e)

₹	P
39	27
81	49
+ 76	82
197	58

(d)

₹	P
392	45
98	07
+ 9	34
499	86

(g) ₹ P
183 95
93 87
+ 20 50
298 32

(h) ₹ P
45 54
92 92
+ 100 29
238 75

2. (a) ₹ P
95 83
– 21 74
74 09

(b) ₹ P
56 50
– 12 49
44 01

(c) ₹ P
70 75
– 29 68
41 07

(d) ₹ P
105 34
– 44 87
60 47

(e) ₹ P
262 300
– 76 93
185 07

(f) ₹ P
615 05
– 129 27
485 78

(g) ₹ P
182 90
– 97 05
85 85

(h) ₹ P
400 00
129 27
270 73

Ex. 11.3

1. (a)

Items	Quantity	Price (in ₹)
Atta	5 kg	72.50
Washing soap	2 kg	56.50
4 × Soap	4 pieces	72.00
	Total	201.00

(b)

Items	Quantity	Price (in)
Rice	3 kg	136.50
Butter	500 g	62.00
Potato Chips	1 packet	16.60
Salt	5 kg	25.00
	Total	240.10

(c)

Items	Quantity	Price (in ₹)
Atta	4 kg	58.00
Sugar	3 kg	50.10
Bread	5 packets	77.50
Salt	1 kg	05.00
	Total	190.60

(d)

Items	Quantity	Price (in ₹)
Butter	500 g	62.50
Bread	1 packte	15.50
Potato chips	3 packets	49.80
	Total	127.30

2. (a) ₹ 196.75
₹ 272.40
+ ₹ 304.50
773.65

₹ 1000.00
– ₹ 773.65
226.35

₹ 226.35 will be returned back

(b) ₹ 208.75
₹ 106.40
₹ 282.95
₹ 195.70
793.80

₹ 1000.00
– ₹ 793.80
206.20

₹ 206.20 will be returned back

(c) ₹ 306.95 ₹ 1000.00
₹ 289.50 – ₹ 782.35
₹ 101.70 0217.65
₹ 56.80
+ ₹ 27.40
782.35 ₹ 217.65 will be returned back

(d) ₹ 125.00 ₹ 1000.00
₹ 179.00 – ₹ 497.00
₹ 78.00 503.00
₹ 115.00
497.00 ₹ 503 will be returned back

Beat the Clock

1. Karuna bought bananas = $30 \times 3 = ₹ 90$
   Karuna paid = ₹ 90
2. 5 pens 3. 23 4. 48.4

Ex. 11.4

1. (a) Cost of 1 note book = ₹ 37.20
Cost of 6 note books = 37.20×6
= ₹ 223.20
∴ 6 note books cost ₹ 223.20

(b) Cost of 1 pencil = ₹ 11.65
Cost of 7 pencils = 11.65×7
= ₹ 81.55
∴ 7 pencils cost ₹ 81.55

(c) Cost of 1 bottle = ₹ 23.75
Cost of 8 bottles = 23.75×8
= 190
= ₹ 190
∴ 8 bottles cost ₹ 190

(d) Cost of 1 eraser = ₹ 2.25

Cost of 9 erasers = 2.25×9

$= 20.25$

$= \overline{\underline{₹\ 20.25}}$ ∴ cost of a erasers in ₹ 20.25

(e) Cost of 1 book = ₹ 156.25

∴ cost of 5 books = 156.25×5

$= \overline{\underline{₹\ 781.25}}$

∴ 5 books cost ₹ 781.25

2. Cost of motor cycle = ₹ 41583

Cost of bicycle = + ₹ 1560.25

$\overline{\underline{₹\ 43143.25}}$

∴ Total cost of motor cycle and bicyele is ₹ 43143.25

3. Cost of 1 shirt = ₹ 125.75

Cost of 1 pans = ₹ 25.35

Cost of 1 tie = ₹ 95.90

$\overline{\underline{247.00}}$

Money given to shopkeeper = ₹ 500.00

Cost of all items = ₹ 247.00

Money given back by shopkeeper = 253.00

∴ The shopkeeper will return ₹ 253 back

4. Total cost of all items

Rice = ₹ 125.85

Sugar = ₹ 32.75

Tea = ₹ 16.28

Tootpaste = ₹ 51.35

$\overline{\underline{226.23}}$

Money given to shopkeeper = ₹ 1000.00

Cost of all items = ₹ 226.23

$\overline{\underline{₹\ 773.77}}$

∴ Shopkeeper returned ₹ 773.77

5. Cost of 1 pen = ₹ 35.40

∴ cost of 5 pens = 35.40×8

= ₹ 283.20

∴ Cost of 8 pens is ₹ 283.20

6. Cost of 1 bag = ₹ 165.52

∴ cost of 12 bags = 165.52×12

$$\begin{array}{r} 165.52 \\ \times\ 12 \\ \hline 33104 \\ 165520 \\ \hline 1986.24 \end{array}$$

∴ 12 bags cost ₹ 1986.24

7. Money earned in 7 days = ₹ 374.36

∴ Money earned in 1 day = $374.36 \div 7$

$$\begin{array}{r} 53.48 \\ 7\overline{)\ 374.36} \\ 35 \\ \hline 24 \\ 21 \\ \hline 33 \\ 28 \\ \hline 56 \\ 56 \\ \hline 00 \end{array}$$

∴ The man earns ₹ 53.48 in one day

Mental Maths

Do yourself

Sum up

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

2. (a)

₹	P
75	81
+ 81	75
157	56

(b)

₹	P
105	76
+ 85	81
191	57

(c)

₹	P
256	78
24	91
5	08
286	77

(b)

₹	P
89	97
12	83
216	87
319	67

Ex. 12.1

1. (a) 280 centimeters (b) 160 centimeters
(c) 80 centimeters (d) 40 centimeters
(e) 40 centimeters

2. 120 centimeters **3.** 240 centimeters

Ex. 12.2

1. (a) Do yourself (b) 2 students (c) 4 students
(d) Wednesday (e) Monday

2. (a) Do yourself (b) Saturn (c) 6 votes
(d) Mercury and Uranus (e) 5 votes
(f) False

3. (a) Do yourself (b) Tiger (c) 6 bugs (d) 9 bugs
(e) False (f) Somya and Frazer

4. Do yourself

Ex. 12.3

1. Do yourself

2. (a) 25% (b) Section B
(c) Section C and Section E (d) 5%

3. (a) Red (b) Blue (c) Green (d) No

4. (a) Swimming (b) Athletics (c) Football

Ex. 12.4

1. (a) Mrs. Clark (b) 34 Cans (c) Mrs. Miller's
(d) Mr. Smith's (e) Ms. Wilson (f) Mrs. Clark
(g) Do yourself

2. (a) 𝍸 ||| 8

(b) 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 30

(c) 𝍸 𝍸 𝍸 | 16

(d) 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||| 38

(e) 𝍸 𝍸 |||| 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 | 46

(f) 𝍸 𝍸 |||| 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 |||| 54

3. (a) 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 |||

(b) 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 |

(c) 𝍸 𝍸 𝍸 |||

(d) 𝍸 𝍸 𝍸 𝍸 𝍸

(e) 𝍸 𝍸 𝍸 𝍸

(f) 𝍸 𝍸 ||

Maths MAGIC

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