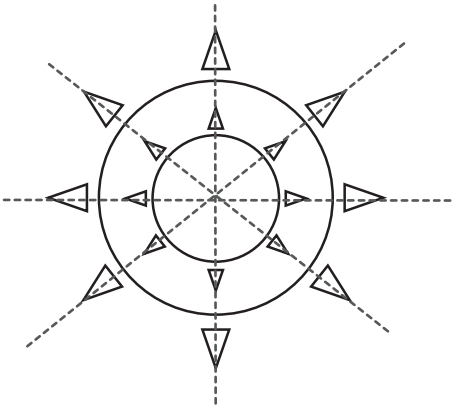
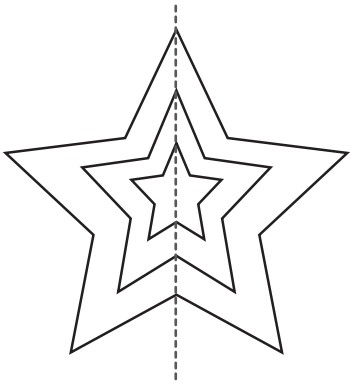
1 Patterns

Answers

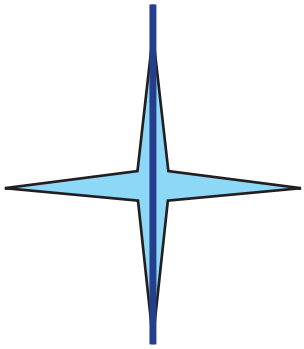
Practice Time

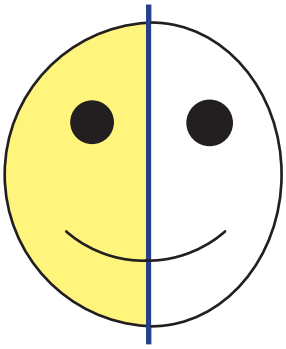
1.

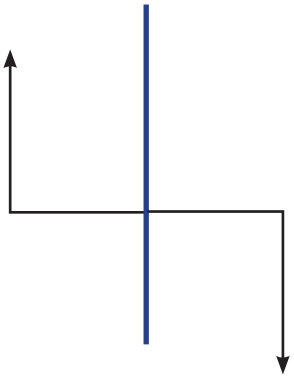




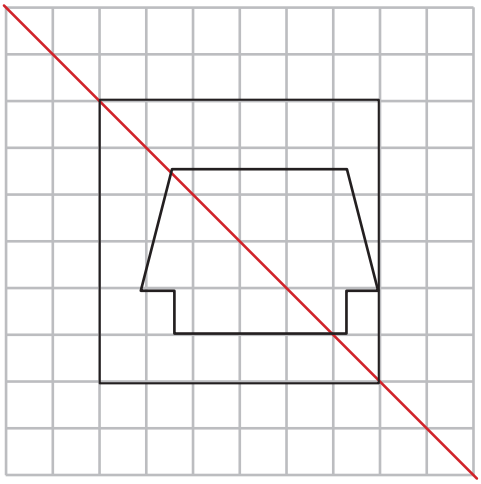
2.

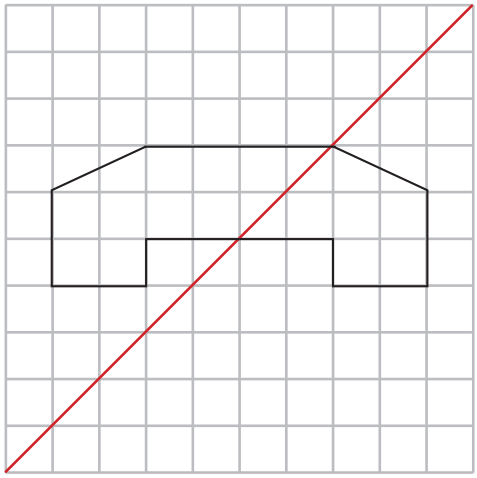


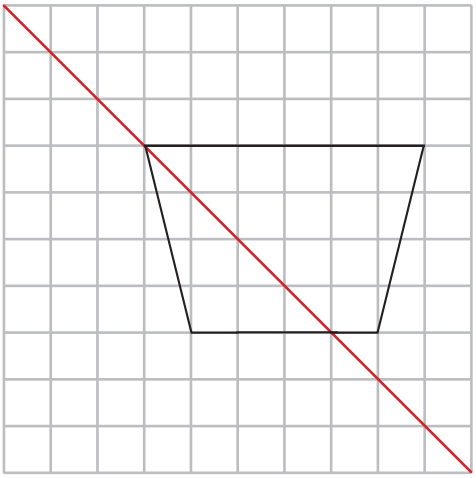


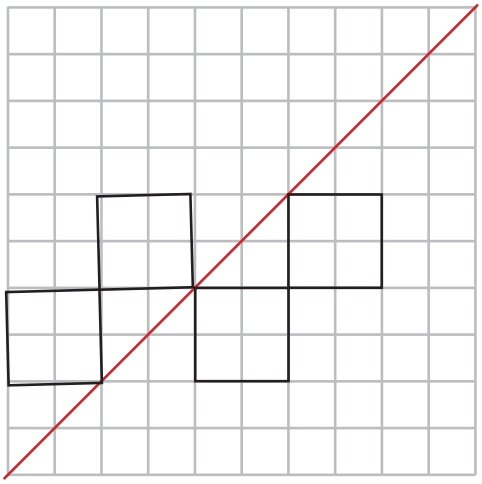


3.

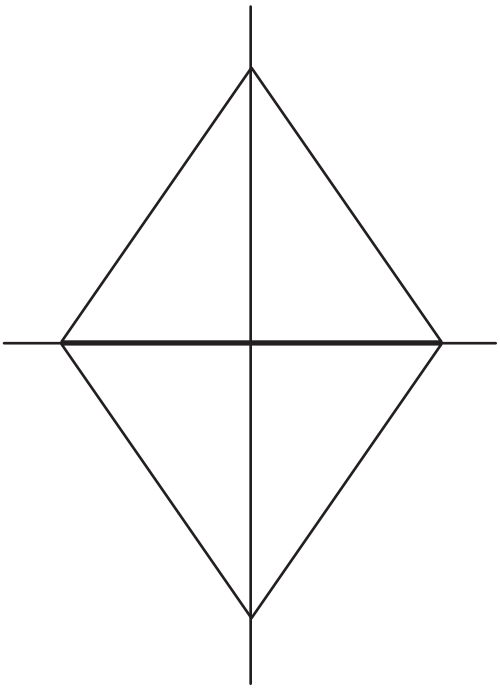


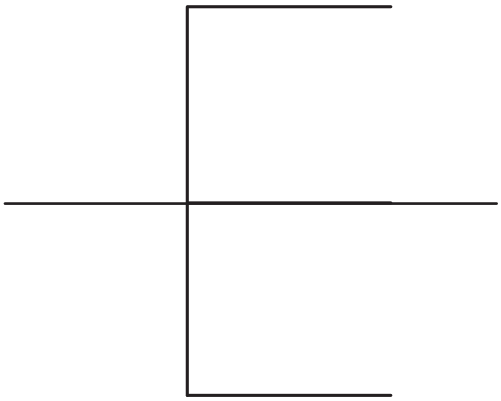






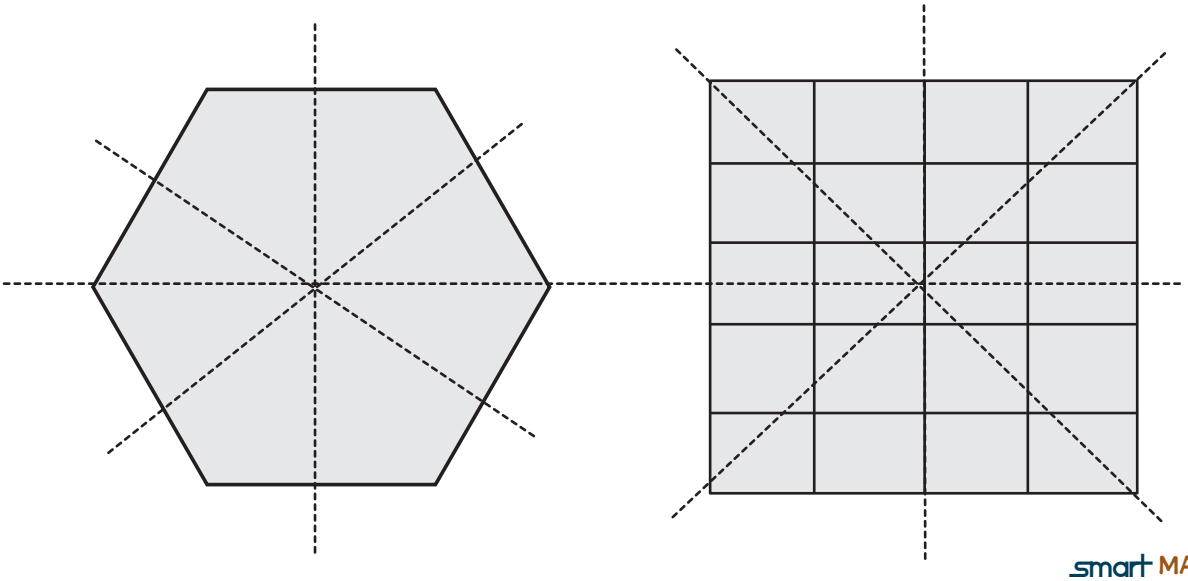
Scan Your Brain





Hots Questions

1.



2 Numbers and Numeration

Answers

Practice Time

1.

b)

2,75,24,351 Two crores seventy five lakh twenty four thousand three hundred and fifty one

2,75,24,351 Twenty seven million five hundred twenty four thousand three hundred fifty one

c)

12,00,00,012 Twelve crore and Twelve

120,000,012 One hundred twenty million and twelve

d)

20,30,00,010 Twenty crore thirty lakh and ten

203,000,010 Two hundred three million and ten

e)

79,20,03,002 Seventy nine crore twenty lakh three thousand and two.

79,20,03,002 Seven hundred ninety two million three thousand and two.

f)

8,38,47,839 Eight crore thirty eight lakh forty seven thousand eight hundred and thirty nine

83,847,839 Eighty three million eight hundred forty seven thousand eight hundred thirty nine

g)

28,38,32,974 Twenty eight crore and thirty eight lakh and thirty two thousand nine hundred and seventy four

283,832,974 Two eighty three million and eight hundred thirty two thousand and nine seventy four

h)

39,84,23,984 Thirty nine crore eighty four lakh twenty three thousand nine hundred and eighty four

39,84,23,984 Three hundred ninety eight million four hundred twenty three thousand nine hundred eighty four.

i)

73,89,50,573 Seventy three crore eighty nine lakh fifty thousand five hundred and seventy three

73,89,50,573 Seven hundred thirty eight million nine hundred fifty thousand five hundred seventy three

j)

485,937,389 Forty eight crore fifty nine lakh thirty seven thousand three hundred and eighty nine

485,937,389 Four hundred eighty five million nine hundred thirty seven thousand three hundred eighty nine

k)

57,48,93,574 Fifty seven crore Forty eight lakh ninety three thousand five hundred and seventy four.

57,48,93,574 Five hundred seventy four million eight hundred ninety three thousand five hundred seventy four.

l)

895,700,909 Eighty nine crore fifty seven lakh nine hundred and nine

895,700,909 Eight hundred ninety five million seven hundred thousand nine hundred nine

2.

b)

205057438 = 20,00,00,000 + 50,00,000 + 50,000 + 7,000 + 400 + 30 + 8

205057438 = 200,000,000 + 5,000,000 + 50,000 + 7,000 + 400 + 30 + 8

c)

631694023 = 60,00,00,000 + 3,00,00,000 + 10,00,000 + 6,00,000 + 90,000 + 4,000 + 20 + 3

631694023 = 600,000,000 + 30,000,000 + 1,00,000 + 6,00,000 + 90,000 + 4,000 + 20 + 3

d)

500330003 = 50,00,00,000 + 3,00,000 + 30,000 + 3

500330003 = 500,000,000 + 300,000 + 30,000 + 3

e)

122122122 = 10,00,00,000 + 200,00,000 + 20,00,000 + 1,00,000 + 20,000 + 2,000 + 100 + 20 + 2

122122122 = 100,000,000 + 20,000,000 + 2,000,000 + 100,000 + 20,000 + 2,000 + 100 + 20 + 2

f)

800550005 = 80,00,00,000 + 5,00,000 + 50,000 + 5

800550005 = 800,000,000 + 500,000 + 50,000 + 5

g)

76543256 = 7,00,00,000 + 60,00,000 + 5,00,000 + 40,000 + 3,000 + 200 + 50 + 6

76543256 = 70,000,000 + 6,000,000 + 500,000 + 40,000 + 3,000 + 200 + 5 + 6

h)

27483949 = 200,00,000 + 70,00,000 + 4,00,000 + 80,000 + 3,000 + 900 + 40 + 9

27483949 = 20,000,000 + 7,000,000 + 400,000 + 80,000 + 3,000 + 900 + 40 + 9

i)

253768376 = 20,00,00,000 + 500,00,000 + 30,00,000 + 7,00,000 + 60,000 + 8,000 + 300 + 70 + 6

253768376 = 200,000,000 + 50,000,000 + 3,000,000 + 700,000 + 60,000 + 8,000 + 300 + 70 + 6

j)

483567485 = 40,00,00,000 + 8,00,00,000 + 30,00,000 + 5,00,000 + 60,000 + 7,000 + 400 + 80 + 5

483567485 = 400,000,000 + 80,000,000 + 3,000,000 + 500,000 + 60,000 + 7,000 + 400 + 80 + 5

k)

676837532 = 60,00,00,000 + 700,00,000 + 6,000,000 + 8,00,000 + 30,000 + 7,000 + 500 + 30 + 2

676837532 = 600,000,000 + 70,000,000 + 6,000,000 + 800,000 + 30,000 + 7,000 + 500 + 30 + 2

3.

Number	Place Value
64, 39, 02, 864	9 × 100000
38, 54, 90, 345	8 × 10000000
20, 10, 40, 405	4 × 10000
92, 18, 49, 371	1 × 1000000
41, 57, 62, 098	2 × 1000
54, 90, 23, 456	5 × 100000000

4. a) 915,016,070
   b) 60,206,528
   c) 700,700,700
   d) 270,005,006
   e) 2, 022,222
   f) 60,050,030

Number	Millions			Thousands			Ones		
	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
	9	1	5	0	1	6	0	7	0
	0	6	0	2	0	6	5	2	8
	7	0	0	7	0	0	7	0	0
	2	7	5	0	0	4	0	0	6
	0	0	2	0	2	2	2	2	2
	0	6	0	0	5	0	0	3	0

Practice Time B

1. a) >
   b) >
   c) <
   d) >
   e) <
   f) >
   g) =
   h) <

2.

1092353, 13985720, 109274620,110923456, 149872311, 164367853

02342365, 21121121, 21313121, 212263893, 223234516, 233112233

500921765, 505035421, 505073892, 505729184, 505912345, 505981234

446568231, 446824371, 446832901, 448668661, 448866441, 449123564

3.

893461834, 759102540, 748932165, 695438921, 482930453, 289345214

40937819836, 5902164729, 1987235467, 691287353, 309278361, 29852103

987654231, 976301245, 975312468, 921837465, 902198237, 902143876

8000000008, 888000888, 880088008, 808808808, 800800800, 800080008

Scan Your Brain

1.

2,30,00,339 = Two crore thrity lakh three hundred and thirty nine

23,0,00,339 = Two hundred three million three hundred thirty nine

2.

13,90,03,943 = Thirteen crore ninety lakh, three thousnad nine hundred and forty three

139,003,943 = One hundred thrity nine million three thousand nine hundred forty three

3.

10,00,09,000 = Ten crore and nine thousand

100,009,000 = One hundred million and nine thousand

4.

3,40,00,800 = Three crore forty lakh and eight hundred

34000800 = Thirty four million and Eight hundred

5.

23,90,00,746 = Twenty three crore ninety lakh seven hundred forty six

239,000,746 = Two hundred thirty nine million seven hundred forty six

6.

50,00,00,003 = Fifty crore and three

500,000,003 = Five hundred million three

7.

84,90,00,200 = Eighty four crore, ninety lakh and two hundred

849,000,200 = Eight hundred forty nine million two hundred

8.

10,00,02,908 = Ten crore two thousand nine hundred and eight

100,002,908 = One hundred million two thousand nine hundred eight

2. a) 5,52,18,372
   b) 265,424,015
   c) 80,00,35,012
   d) 600,000,005

3.

Greatest	Smallest
948973873	10923094

4. 98654321, 12345689

   98765420, 20456789

   76543210, 10234567

Hots Questions

1. a) 1
   b) 10
   c) 1
   d) 100

3 Operations on Whole Numbers

Answers

Practice Time

1.

$$\begin{array}{r} 837438892 \\ +\ 347856932 \\ \hline 1185295824 \end{array}$$

$$\begin{array}{r} 7346587 3 \\ +\ 5827364 38 \\ \hline 656202311 \end{array}$$

$$\begin{array}{r} 6828928 \\ +\ 374234878 \\ \hline 381063806 \end{array}$$

$$\begin{array}{r} 375389235 \\ +\ 430043460 \\ \hline 805432695 \end{array}$$

$$\begin{array}{r} 39028532 \\ 45792 \\ +\ 2503 \\ \hline 39076827 \end{array}$$

$$\begin{array}{r} 2984651 \\ 5093054 \\ +\ 20224 \\ \hline 8097929 \end{array}$$

$$\begin{array}{r} 35806911 \\ 4906 \\ +\ 903 \\ \hline 35812720 \end{array}$$

$$\begin{array}{r} 50238621 \\ 1309 \\ +\ 4789321 \\ \hline 55029251 \end{array}$$

$$\begin{array}{r} 58497563 \\ 489 \\ 3273485 \\ +\ 2478 \\ \hline 61774015 \end{array}$$

$$\begin{array}{r} 83946890 \\ 988009486 \\ +\ 20005 \\ \hline 1071976381 \end{array}$$

2. a) 205, 607, 880

205, 607, 880 + 3546798

= 209154678

b) 7077837099

7077837099 + 7583720

= 7085420819

c) 867926528

867926528 + 5638301

= 873564829

d) 908753754

908753754 + 567

= 908754321

e) 780134569

78133657 + 912

= 78134569

f) 344681902

344681902 + 589989

= 345271891

g) 8124878

8124878 + 4263848

= 12388726

h) 302775054

302775054 + 95803849

= 398578903

i) 48130200

48130200 + 903864

= 49034064

j) 165585054

165585054 + 52489342

= 218074396

3. a) 1,000,000 b) 900,891

c) 3,840,404 d) 10,000,000

e) 1000000 f) 999999999

4. a)

$$\begin{array}{r} 715715689 \\ -598348220 \\ \hline 117367469 \end{array}$$

b)

$$\begin{array}{r} 38765421 \\ -\ 7589 \\ \hline 38,773,010 \end{array}$$

c)

$$\begin{array}{r} 7598502 \\ +1045967 \\ \hline 8644469 \end{array}$$

d)

$$\begin{array}{r} 567985 \\ +195990 \\ \hline 763975 \\ \hline \text{Gain} = 809565 \\ -763975 \\ \hline 45,590 \end{array}$$

e)

$$\begin{array}{r} 35698400 \\ -19184545 \\ \hline 16513855 \end{array}$$

Practice Time

1.

$$\begin{array}{r} 277884 \\ 3473550 \\ \hline 3751434 \end{array}$$

$$\begin{array}{r} 2551905 \\ +8506350 \\ \hline 11058255 \end{array}$$

$$\begin{array}{r} 2195060 \\ +30730840 \\ \hline 32925900 \end{array}$$

$$
\begin{array}{r}
1590590 \\
0000000 \\
238588500 \\
\hline
240179090
\end{array}
$$

$$
\begin{array}{r}
1586736 \\
15867360 \\
+\ 35260800 \\
\hline
52714896
\end{array}
$$

$$
\begin{array}{r}
283426 \\
14171300 \\
+\ 28342600 \\
\hline
42797326
\end{array}
$$

2.

a)
$$
\begin{array}{r}
197342 \\
\times\ 39 \\
\hline
1776078 \\
592026\times \\
\hline
7696338
\end{array}
$$

b)
$$
\begin{array}{r}
6375842 \\
\times\ 125 \\
\hline
31879210 \\
12751684\times \\
637584200 \\
\hline
796980250
\end{array}
$$

c)
$$
\begin{array}{r}
400923 \\
\times\ 700 \\
\hline
000000 \\
0000000 \\
280646100 \\
\hline
280646100
\end{array}
$$

d)
$$
\begin{array}{r}
1098347 \\
\times\ 205 \\
\hline
5491753 \\
000000000 \\
219669400 \\
\hline
225161153
\end{array}
$$

e)
$$
\begin{array}{r}
5678898 \\
\times\ 676 \\
\hline
34073388 \\
397522860 \\
3407338800 \\
\hline
3838935048
\end{array}
$$

f)
$$
\begin{array}{r}
80542265 \\
\times\ 608 \\
\hline
644338120 \\
0000000000 \\
48325359000 \\
\hline
48969697120
\end{array}
$$

g)
$$\begin{array}{r} 7990786 \\ \times\ 541 \\ \hline 7990786 \\ 319631440 \\ 3995393000 \\ \hline 4323015226 \end{array}$$

h)
$$\begin{array}{r} 98786543 \\ \times\ 432 \\ \hline 197573086 \\ 2963596290 \\ 39514617200 \\ \hline 42675786576 \end{array}$$

3. a) Q = 53708, R = 3

2094615 = 39 × 53708 + 3

= 2094615

b) Q = 53175, R = 17

3456392 = 65 × 53175 + 17

= 3456392

c) Q = 188007, R = 15

9024351 = 48 × 188007 + 15

= 9024351

d) Q = 102463, R = 0

5840391 = 102463 × 57 + 0

= 5840391

e) Q = 38366, R = 53

4028483 = 105 × 38366 + 53

= 4028483

f) Q = 183672, R = 272

95142368 = 518 × 183672 + 272

= 95142368

g) Q = 1618450, R = 262

572931562 = 354 × 1618450 + 262

= 572931562

h) Q = 1993882, R = 212

901234876 = 452 × 1993882 + 212

= 901234876

4. a)

75865
× 326
455190
1517300
22759500
24731990

b)

36782
× 265
183910
2206920
7356400
9747230

c)

6845956
× 45
34229780
273838240
308068020

d)

356	5367988	15078
	356	
	1807	
	1780	
	2798	
	2492	
	3068	
	2848	
	220	

Scan Your Brain

1. a) 276,188,513 b) 42,192,087
   c) 464,942,807
2. a) 416,619,861 b) 881,309,549
   c) 131,018,232 d) 8,778,409
3. a) 1000 b) 398
   c) 10000 d) 309
   e) 100 f) 879

4. a) 5561324011
   b) 2343935724
   c) 3545926376
   d) 52502536980
5. a) Q = 113670, R = 3
   b) Q = 9837265, R = 84
   c) Q = 50617, R = 228
   d) Q = 2308459, R = 17

Hots Questions

1. 326 Must be subtracted from 95142728 to make it divisible by 498.
2. 64 is the least number that has to be added to 40064 to make it divisible by 76.

4 Simplification of Numerical Expressions

Answers

Practice Time

1. a) 2
   b) 6
   c) 54
   d) 38
   e) 11
   f) 9
   g) 170
   h) 5.4
   i) 10.92
   j) 4.82
   k) $\frac{5}{6}$
   l) $\frac{109}{30}$
   m) $\frac{5}{2}$
   n) $\frac{152}{15}$

Practice Time

1. a) 45
   b) 30
   c) 527
   d) $\frac{4643}{19}$

e) $\frac{2219}{}$

f) 209

g) 1634

h) 23.94

i) 10.63

j) 86.25

k) $\frac{113}{180}$

l) $\frac{-267}{1404}$

m) $\frac{37}{4}$

n) $\frac{1}{143}$

Scan Your Brain

1. a) 26

b) 15

c) 79

d) $\frac{131}{3}$

e) $\frac{65}{7}$

f) 30720

g) 40

h) 15

Hots Questions

1. a) 7494

b) 8

c) 647

d) 7544

e) –126.60

5 Divisibility Tests

Answers

Practice Time

1. 9349878, 10685058 , 843958692 , 76749852
2. 83279, 7439271, 9489382
3. 77365632, 8276240, 57263864, 27736872
4. 2715361, 7467845, 8629632, 2592579, 9631831
5. 8373300, 12763425, 7647475, 3736325, 6353550

Scan Your Brain

1.

Divisor / Dividend	2	3	5	6	7	9	11	15	25
237647823	×	✓	×	×	×	×	×	×	×
37865	×	×	✓	×	×	×	×	×	×
5898475	×	×	✓	×	×	×	✓	×	✓
89370	✓	✓	✓	✓	×	✓	×	✓	×
95837	×	×	×	×	✓	×	×	×	×
9097	×	×	×	×	×	×	✓	×	×
153125	×	×	✓	×	✓	×	×	×	✓
173670	✓	✓	✓	✓	✓	×	×	✓	×
65232	✓	✓	×	✓	×	✓	×	×	×
1231700	✓	×	✓	×	×	×	×	×	✓
6857565	×	✓	✓	×	×	×	✓	✓	×

Hots Questions

1. a) 71645, 321972 b) 1048, 47008 c) 11286, 1056 d) 1080, 1125

6 HCF and LCM

Answers

Practice Time

1. a) 25
   b) 360
   c) 16
   d) 43
   e) 68
   f) 102
   g) 12
   h) 5
   i) 102
   j) 23
   k) 2
   l) 49
   m) 3
   n) 28
   o) 34

2. a) 819
   b) 96
   c) 1596
   d) 1666
   e) 847
   f) 490
   g) 1368
   h) 528
   i) 1625
   j) 2520
   k) 4725
   l) 520
   m) 442
   n) 1280
   o) 720

Practice Time

1. a) 24
   b) 16
   c) 9
   d) 6
   e) 6
   f) 5
   g) 5
   h) 39
   i) 36
   j) 22
   k) 8
   l) 39
   m) 4
   n) 2

2. a) 528 b) 1148
c) 450 d) 108
e) 72 f) 144
g) 280 h) 504
i) 720 j) 48
k) 630 l) 924
m) 8736 n) 156

Scan Your Brain

1. a) 2 b) 2
2. a) 2 b) 2

Hots Questions

1. a) 48 b) 45

7 Fractions

Answers

Practice Time

1. a) $5\frac{2}{6}$ b) $2\frac{4}{5}$ c) $2\frac{3}{16}$
d) $4\frac{1}{11}$ e) $6\frac{3}{2}$ f) $13\frac{3}{4}$
2. a) $\frac{26}{11}$ b) $\frac{20}{13}$ c) $\frac{18}{5}$
d) $\frac{69}{7}$ e) $\frac{49}{9}$ f) $\frac{27}{8}$
3. a) $\frac{19}{21}$ b) $\frac{2}{4}$ c) $\frac{4}{7}$
d) $\frac{4}{5}$ e) $\frac{3}{22}$ f) $\frac{1}{2}$

g) $\frac{2}{3}$ h) $\frac{7}{8}$ i) $\frac{4}{11}$

j) $\frac{1}{9}$ k) $\frac{5}{7}$ l) $\frac{7}{12}$

4. a) $\frac{4}{20}$, $\frac{6}{15}$, $\frac{8}{20}$, $\frac{10}{25}$, $\frac{12}{30}$

b) $\frac{6}{8}$, $\frac{9}{12}$, $\frac{12}{16}$, $\frac{15}{20}$, $\frac{18}{24}$

c) $\frac{10}{14}$, $\frac{15}{21}$, $\frac{20}{28}$, $\frac{25}{35}$, $\frac{30}{42}$

d) $\frac{8}{22}$, $\frac{12}{33}$, $\frac{16}{44}$, $\frac{20}{55}$, $\frac{24}{66}$

e) $\frac{22}{24}$, $\frac{33}{36}$, $\frac{44}{48}$, $\frac{55}{60}$, $\frac{66}{72}$

f) $\frac{10}{16}$, $\frac{15}{24}$, $\frac{20}{32}$, $\frac{25}{40}$, $\frac{30}{48}$

g) $\frac{12}{26}$, $\frac{18}{39}$, $\frac{24}{52}$, $\frac{30}{65}$, $\frac{36}{78}$

5. a) < b) > c) >

d) < e) < f) >

g) < h) < i) <

j) < k) > l) >

6. a) $\frac{2}{9}, \frac{1}{3}, \frac{3}{7}, \frac{1}{2}, \frac{4}{5}$

b) $\frac{4}{15}, \frac{11}{21}, \frac{2}{3}, \frac{5}{6}, \frac{8}{9}$

c) $\frac{4}{15}, \frac{11}{21}, \frac{2}{3}, \frac{5}{6}, \frac{8}{9}$

7. a) $\frac{13}{9}, \frac{3}{4}, \frac{9}{30}, \frac{5}{18}, \frac{1}{6}$

b) $\frac{7}{8}, \frac{17}{20}, \frac{3}{4}, \frac{9}{16}, \frac{15}{32}$

c) $\frac{7}{8}, \frac{2}{3}, \frac{3}{5}, \frac{4}{7}, \frac{1}{2}$

Practice Time

1. a) $\frac{6}{9}$ b) $\frac{25}{24}$ c) $\frac{206}{88}$

d) $\frac{75}{100}$ e) $\frac{17}{4}$ f) $\frac{213}{56}$

g) $\frac{103}{30}$ h) $\frac{753}{322}$ i) $\frac{227}{36}$

j) $\frac{53}{10}$ k) $\frac{389}{156}$ l) $\frac{608}{99}$

m) $\frac{491}{52}$ n) $\frac{451}{100}$ o) $\frac{21}{12}$

2. a) 5 b) $\frac{12}{5}$ c) $\frac{17}{6}$

d) $\frac{4}{11}$ e) $\frac{27}{16}$ f) $\frac{9}{12}$

g) $\frac{79}{18}$ h) $\frac{65}{12}$ i) $\frac{81}{16}$

j) $\frac{19}{9}$ k) $\frac{173}{42}$ l) $\frac{3}{6}$

m) $\frac{5}{4}$ n) $\frac{2}{6}$ o) $\frac{11}{9}$

3. a) $\frac{83}{18}$ b) $\frac{145}{20}$ c) $\frac{9}{12}$

d) $\frac{335}{88}$ e) $\frac{61}{24}$

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

$= \frac{11}{4}+\frac{3}{2}+\frac{7}{4}=\frac{11+6+7}{4}$

$= \frac{\cancel{24}}{\cancel{4}} = 6$ Cloth left = 7m – 6m = 1m

b) First day = $\frac{1}{5}\times 750$ = 150

$\Rightarrow$ Pages left = 750 – 150 = 600 pages

$\Rightarrow$ Second day = $\frac{2}{3}\times 600$ = 400 pages

Third day = 750 – (150 + 400) = 200 pages.

c) Total distance 6 m on Monday, Tuesday, Wednesday and Thursday

$= \left(7\frac{1}{2}+7\frac{1}{5}+6\frac{7}{8}+8\frac{2}{3}\right)$km

$= \left(\frac{15}{2}+\frac{36}{5}+\frac{55}{8}+\frac{26}{3}\right)$ km

$= \frac{900+864+825+1040}{120} = \frac{3629}{120}$ cm

Distance ran on Friday = $\left(37-\frac{3629}{120}\right)$

$= \frac{4440-3629}{120}$ km = $\frac{811}{120}$ km

Practice Time

1. a) $\frac{35}{88}$ b) 10 c) $\frac{24}{9}$ d) $\frac{66}{21}$

   e) $\frac{376}{9}$ f) $\frac{12}{7}$ g) $\frac{24}{180}$ h) $\frac{384}{9}$

   i) $\frac{646}{105}$ j) $\frac{680}{33}$ k) $\frac{792}{1980}$ l) $\frac{648}{288}$

2. a) $\frac{3}{7}, \frac{4}{5}$ b) $\frac{3}{5}$ c) 0 d) $\frac{1}{7}, \frac{5}{8}, \frac{4}{5}$

3. a) 288 days b) ₹ $\frac{102}{5}$ c) 45 minutes

Practice Time

1. a) $\frac{3}{10}$ b) $\frac{1}{2}$ c) $\frac{7}{8}$ d) $\frac{192}{147}$

   e) $\frac{4}{27}$ f) $\frac{578}{294}$ g) $\frac{32}{3}$ h) $\frac{84}{17}$

   i) 2 j) $\frac{165}{91}$ k) $\frac{3}{2}$ l) $\frac{16}{34}$

2. a) $\frac{2}{7}$ b) $\frac{1}{1}$ c) $\frac{0}{0}$ d) $\frac{0}{0}$

   e) 0

3. a) $\frac{135}{2}$ b) 30 children

Scan Your Brain

1. a) $\frac{153}{77}$ b) $\frac{47}{24}$ c) $\frac{257}{24}$ d) $\frac{220}{24}$

2. a) $\frac{19}{8}$ b) $\frac{27}{6}$ c) $\frac{19}{12}$ d) $\frac{141}{28}$

3. a) $\frac{198}{455}$ b) $\frac{20,088}{1925}$ c) 7

Do it yourself

Hots Questions

Part of chocolate bar that Raveena has = $4\frac{2}{8}$

Part of chocolate bar that Seema has = $3\frac{2}{3}$

Total chocolate bar = $4\frac{2}{8} + 3\frac{2}{3}$

$= \frac{34}{8} + \frac{11}{3}$

$= \frac{102 + 88}{24}$

$= \frac{190}{24}$

$= \frac{85}{12}$

After dividing the chocolate bar equally, each will get = $\frac{85}{12} \div 2$

$= \frac{85}{24}$

$\therefore$ $\frac{85}{24}$ part of the chocolate bar will be divided among them equally

8 Methods for Money Calculations

Answers

Practice Time

1. A bus can carry passengers = $\frac{420}{6}$ = 70 passengers

   25 buses can carry = 70 x 25 = 1750 passengers

2. 1 person requires = $\frac{500}{3}$ ml of milk

   Milk needed for 15 people = $\frac{500}{3}$ x 15 = 2500 ml

3. Cost of 1 book = ₹ $\frac{750}{6}$ = ₹ 125

   Cost of 32 books = 32 x 125 = ₹ 4,000

4. No. of books in 1 shelf = 84 ÷ 3 = 28 books

   No. of shelves to place 588 books = 588 ÷ 28 = 21 shelves

5. 1 bench is required to sit = 36 ÷ 18 = 2 children

   Benches required for 1356 children = 1356 ÷ 2 = 678 benches

6. Distance covered in 1 hour = 108 ÷ 3 = 36 km

   Distance covered in $5\frac{1}{2}$ hrs = 36 x $5\frac{1}{2}$

   = 36 x $\frac{11}{2}$ = 198 km

7. Cost of 1 apple = 228 ÷ 12 = ₹ 19

   Cost of 26 apples = 26 x 19 = ₹ 494

8. 1 Worker can lay fencing = 16 ÷ 4 = 4 m

   Workers required to lay 108 m fencing = 108 ÷ 4 = 27 workers

9. Cost of 1m cloth = 1008 ÷ 14 = ₹ 72

Cost of 39 m cloth = 72 x 39 = ₹ 2808

10. Money spent on 1 person = 50,000 ÷ 32 = ₹ $\frac{3125}{2}$

Money spent on 80 people = 80 x $\frac{3125}{2}$

= 3125 x 40 = ₹ 1,25,000

11. 1 tailor can stitch = 102 ÷ 17 = 6 shirts

Tailors required to stitch 150 shirts

= 150 ÷ 6 = 25 tailors

12. 1 bag of cement weighs = $\frac{496}{16}$ = 31 kg

Weight of 52 bags of cement = 52 x 31 = 1612 kg

13. Cost of 1egg = $\frac{180}{6}$ = ₹ 5

Cost of 90 eggs = 90 x 5 = ₹ 450

14. No. of pages read in 1 hr = $\frac{123}{3}$ = 41 pages

Hours required to read 287 pages = 287 ÷ 41 = 7 hours

Scan Your Brain

1. Cost of 6 kg of apples & 8 kg of oranges = ₹ 186

Cost of 1 kg apple = ₹ 15

Cost of 6 kg of apples = 6 × ₹ 15

= ₹ 90

Cost of 8 kg of oranges = ₹ 186 – ₹ 90

= ₹ 96

Cost of 1 kg orange = ₹ 96 ÷ 8

= 12

∴ Cost of 2 kg apples 3 kg oranges = 2 × ₹ 15 + 3 × ₹ 12

= ₹ 30 + ₹ 36 = ₹ 66

2. Cost of 7 kg of rice = ₹ 299.25

Cost of 1 kg of rice = ₹ 15

Cost of 6 kg of apples = 299.25 ÷ 7

= ₹ 42.75

Hots Questions

a) 12 balls

b) ₹ 48

9 Decimals

Answers

Practice Time

1. a) $\frac{104}{10}$; 1 x 10 + 0 x 1 + $\frac{4}{10}$

b) $\frac{904}{100}$; 9 x 1 + $\frac{0}{10}$ + $\frac{4}{100}$

c) $\frac{438902}{1000}$; 4 x 100 + 3 x 10 + 8 x 1 + $\frac{9}{10}$ + $\frac{0}{100}$ + $\frac{2}{1000}$

d) $\frac{590742}{1000}$; 5 x 100 + 9 x 10 + 0 x 1 + $\frac{7}{10}$ + $\frac{4}{100}$ + $\frac{2}{1000}$

e) $\frac{23}{1000}$; 0 x 1 + $\frac{0}{10}$ + $\frac{2}{100}$ + $\frac{3}{1000}$

f) $\frac{8784}{100}$; 8 x 10 + 7 x 1 + $\frac{8}{10}$ + $\frac{4}{100}$

g) $\frac{5488}{100}$; 5 x 10 + 4 x 1 + $\frac{8}{10}$ + $\frac{8}{100}$

h) $\frac{6435}{100}$; $6 \times 10 + 4 \times 1 + \frac{3}{10} + \frac{5}{100}$

i) $\frac{5211}{100}$; $5 \times 10 + 2 \times 1 + \frac{1}{10} + \frac{1}{100}$

j) $\frac{2865}{100}$; $2 \times 10 + 8 \times 1 + \frac{6}{10} + \frac{5}{100}$

k) $\frac{2629}{100}$; $2 \times 10 + 6 \times 1 + \frac{2}{10} + \frac{9}{100}$

l) $\frac{6925}{100}$; $6 \times 10 + 9 \times 1 + \frac{2}{10} + \frac{5}{100}$

m) $\frac{4445}{100}$; $4 \times 10 + 4 \times 1 + \frac{4}{10} + \frac{5}{100}$

n) $\frac{1560}{100}$; $1 \times 10 + 5 \times 1 + \frac{6}{10} + \frac{0}{100}$

o) $\frac{88808}{1000}$; $8 \times 10 + 8 \times 1 + \frac{8}{10} + \frac{0}{100} + \frac{8}{1000}$

p) $\frac{14298}{100}$; $1 \times 100 + 4 \times 10 + 2 \times 1 + \frac{9}{10} + \frac{8}{100}$

q) $\frac{117848}{100}$; $1 \times 1000 + 1 \times 100 + 7 \times 10 + 8 \times 1 + \frac{4}{10} + \frac{8}{100}$

r) $\frac{28392}{100}$; $2 \times 100 + 8 \times 10 + 3 \times 1 + \frac{9}{10} + \frac{2}{100}$

s) $\frac{26521}{1000}$; $2 \times 10 + 6 \times 1 + \frac{5}{10} + \frac{2}{100} + \frac{1}{1000}$

t) $\frac{14028}{1000}$; $1 \times 10 + 4 \times 1 + \frac{0}{10} + \frac{2}{100} + \frac{8}{1000}$

2. a) 392.34 b) 107.6 c) 7040.046 d) 200.04

e) 0.55 f) 340.08 g) 20409.007 h) 1005.366

i) 755.5 j) 9146.318 k) 2622.202 l) 4946.037

Practice Time

1. a) $23\frac{45}{100}$ b) $4\frac{92}{100}$ c) $\frac{9}{100}$ d) $2\frac{5}{1000}$ e) $10\frac{14}{1000}$

   f) $9\frac{8}{10}$ g) $2\frac{65}{100}$ h) $\frac{4}{10}$ i) $\frac{26}{100}$ j) $\frac{75}{100}$

   k) $4\frac{80}{100}$ l) $59\frac{1}{10}$ m) $36\frac{25}{100}$ n) $83\frac{9}{10}$ o) $\frac{24}{100}$

   p) $\frac{37}{1000}$ q) $\frac{5}{1000}$ r) $21\frac{2}{1000}$ s) $\frac{99}{100}$ t) $4\frac{7}{1000}$

   u) $\frac{217}{1000}$

2. a) 0.9 b) 0.019 c) 0.52 d) 3.42 e) 7.2305 f) 31.002

   g) 0.334 h) 2.45 i) 1.044 j) 0.0205 k) 1.57 l) 4.7

   m) 7.23 n) 0.66 o) 2.55 p) 7.7 q) 7.49 r) 3.80

   s) 4.84 t) 5.5 u) 2.75

3. 3.201, 3.20, 0.921 — 1.09, 1.62, 0.003 — 8.284, 4.6921, 2.08, 1.822

   2.90, 1.3, 22.18 — 1.42, 1.666, 6.220 — 4.001, 4.0001, 4.00001, 39.4612

4. a) 9.200, 3.980, 2.700, 4.783, 6.580
   b) 29.000, 3.012, 84.930, 27.500, 83.450
   c) 673.460, 28.301, 2.930, 249.039, 5.890
   d) 4.0006, 7.0800, 54.0063, 7.4002, 8.9300
   e) 39.00700, 4.08050, 690.03008, 42.09030

5.

a) 19.9 (>) 14.8 b) 14.005 (<) 14.5 c) 3.7 (<) 7.03

d) 0.07 (<) 0.7 e) 9 (>) 1.9 f) 14.6 (>) 14.01

g) 6.05 (<) 6.5 h) 14.7 (>) 11.3 i) 20.2 (<) 202

j) 2.02 (>) 2.002 k) 5.5 (>) 5.05 l) 1.72 (<) 16.2

m) 20.8 (<) 21.8 n) 5.5 (>) 3.9 o) 10.1 (<) 100.1

Practice Time

1. a)

$$\begin{array}{r} 2.94 \\ 3.04 \\ \hline 5.98 \end{array}$$

b)

$$\begin{array}{r} 3.74 \\ 82.36 \\ 7.48 \\ \hline 93.58 \end{array}$$

c)

$$\begin{array}{r} 2.90 \\ 1.36 \\ 32.158 \\ \hline 36.418 \end{array}$$

d)

$$\begin{array}{r} 32.01 \\ 32.00 \\ 0.921 \\ \hline 64.931 \end{array}$$

e)

$$\begin{array}{r} 4.001 \\ 4.0101 \\ 4.10001 \\ 4.4 \\ \hline 16.51111 \end{array}$$

f)

$$\begin{array}{r} 74.6 \\ 82.328 \\ 8.373 \\ \hline 165.301 \end{array}$$

g)

$$\begin{array}{r} 1.265 \\ 23.704 \\ 12.98 \\ \hline 37.949 \end{array}$$

h)

$$\begin{array}{r} 3.964 \\ 4.2 \\ 541.43 \\ \hline 549.594 \end{array}$$

i)

$$\begin{array}{r} 0.2753 \\ 105.45 \\ 8.231 \\ \hline 113.9563 \end{array}$$

j)

$$\begin{array}{r} 234.005 \\ 21.92 \\ 5.1 \\ 2.056 \\ \hline 263.081 \end{array}$$

k)

$$\begin{array}{r} 8.5 \\ 9.03 \\ 19.204 \\ 123.405 \\ \hline 160.139 \end{array}$$

2. a)

$$\begin{array}{r} 0.050 \\ -0.005 \\ \hline 0.045 \end{array}$$

b)

$$\begin{array}{r} 5.00 \\ -2.94 \\ \hline 2.06 \end{array}$$

c)

$$\begin{array}{r} 1.420 \\ -0.396 \\ \hline 1.024 \end{array}$$

d)

$$\begin{array}{r} 2.46 \\ -1.94 \\ \hline 0.52 \end{array}$$

e)

$$\begin{array}{r} 8.000 \\ -7.945 \\ \hline 0.055 \end{array}$$

f)

$$\begin{array}{r} 14.6700 \\ -13.9956 \\ \hline 0.6744 \end{array}$$

g)
$$\begin{array}{r} 49.420 \\ -38.455 \\ \hline 10.965 \end{array}$$

h)
$$\begin{array}{r} 99.0000 \\ -97.9959 \\ \hline 1.0041 \end{array}$$

Practice Time

1. a) 127.4 b) 5600.2 c) 7034.5 d) 210
   e) 7020 f) 790 g) 32.841 h) 4.033035
   i) 88.0464 j) 0.96317 k) 14.19215 l) 74.34
   m) 8086.512 n) 3170.2806 o) 2202.0648 p) 3718.5288
   q) 6706.5625 r) 1953.125 s) 409.05 t) 4243.626
   u) 12875 v) 2070.5

Practice Time

1. a) 127.4 b) 0.56002 c) 0.69 d) 2 e) 9.3 f) 7.02
   g) 36 h) 203 i) 6.1 j) 42 k) 20.6 l) 11
   m) 180 n) 71.4 o) 20 p) 150 q) 1.6 r) 0.12
   s) 0.09 t) 13

Practice Time

1. a) 0.5 b) 5.6 c) 1.48 d) 104 e) 256 f) 21048
   g) 5040 h) 12560 i) 4173 j) 9310.3 k) 60 l) 543.9
   m) 7 n) 20010 o) 2300
2. a) 0.042 b) 0.154 c) 0.506 d) 0.002 e) 0.2103
   f) 1.3409 g) 0.0004 h) 0.00039 i) 0.013 j) 0.002
   k) 0.00453 l) 0.050 m) 0.01245 n) 0.000097 o) 0.15
   p) 2.3 q) 0.090 r) 0.0002

Scan Your Brain

a) 204.32 b) 137.009 c) 70.0507

2. a) $2\frac{5}{1000}$ b) $100 + 8 + \frac{3}{100}$ c) $\frac{2}{1000}$

3. a) 2.345 b) 1.0737 c) 0.315 d) 3.34 e) 2.28

4. a) $\frac{4046}{1000}$ b) $\frac{573}{1000}$ c) $\frac{10041}{10000}$ d) $\frac{19}{1000}$ e) $\frac{100002}{10000}$

5. a)
$$\begin{array}{r} 3.24 \\ 54.65 \\ 7.878 \\ \hline 65.768 \end{array}$$
b)
$$\begin{array}{r} 85.493 \\ 9.04 \\ 57.98 \\ 4\ .009 \\ \hline 156.522 \end{array}$$

6. a)
$$\begin{array}{r} 928.870 \\ -42.574 \\ \hline 886.296 \end{array}$$
b)
$$\begin{array}{r} 65.000 \\ -8.373 \\ \hline 56.627 \end{array}$$

7. a) 469.92 b) 33.88737 c) 232.4756

8. a) 4.69 b) 0.141 c) 413.3

9. a) 29000 b) 1201 c) 1000.4

10. a) 1 kg of wheat costs = $\frac{243}{10}$ = ₹ 24.3

b) 100 rubber balls will cost = 100 x 2.85 = ₹ 285

c) Cloth required to stitch 18 shirts = 18 x 2.25 = 40.5 m

d) Total quantity of milk needed by Reena = 4.25 + 5.5 + 3.05 = 12.80 l

e) Wheat left = 200.57 – (39.5 + 59.985 + 99)

= 200.57 – (198.485) = 2.085

f) Total money paid to the shopkeeper = (1 x 2.25) + (7 x 3.35) + (2 x 50.95) + (12 x 1.55)

= 2.25 + 23.45 + 101.9 + 18.6

= ₹ 146.2

Hots Questions

a) 1000 b) 100 c) 1000 d) 23 e) 4200 f) 100

10 Profit and Loss

Answers

Practice Time

1.

C.P.	S.P.	Overheads	Profit	Loss
₹ 345	₹ 402	------	57	
₹ 272	₹ 362	₹ 45	90	
₹ 779	₹ 695	-----		84
₹ 10095	₹ 11000	₹ 112	793	
₹ 2268	₹ 3025	₹ 386	371	

2.

C.P.	Overheads	Profit	Loss	S.P.
₹ 321	₹ 67	₹ 78	-----	466
₹ 538	Nil	-----	₹ 106	432
₹ 1268	₹ 174	-----	₹ 153	1289
₹ 7465	₹ 938	₹ 349	-----	8752
₹ 23943	₹ 1932	-----	₹ 743	25,132

3.

S.P.	Overheads	Profit	Loss	C.P.
₹ 598	₹ 94	₹ 58	-----	446
₹ 9274	₹ 754	-----	₹ 843	9363
₹ 7364	-----	-----	₹ 1204	8568
₹ 38743	₹ 3751	₹ 4921	-----	30,071
₹ 5483	₹ 463	-----	₹ 672	5692

4. a) CP = ₹ 356
SP = ₹ 289
L = ₹ 67

b) CP = ₹ 3069
P = ₹ 200
CP = 3069 – 200
= ₹ 2869

c) P = ₹ 734
SP = ₹ 1236
CP = SP – P
= ₹ 1236 – 734
= ₹ 502

d) L = ₹ 2315
CP = ₹ 18439
SP = 18439 – 2315
= ₹ 16124

e) SP = ₹ 7329
P = ₹ 993
CP = SP – P
= 7329 – 993
= ₹ 6336

Practice Time

1. a) Gain % = 25%

b) Gain % = 10%

c) Loss % = 40%

d) Gain % = 50%

e) Gain % = 39.3%

f) Gain % = 2%

2.

C.P.	S.P.	Profit%	Loss%
₹ 35	42	20	-------
₹ 400	500	25	-------
₹ 625	587.5	------	6
₹ 750	637.5	-------	15
₹ 1125	1237.5	10	
₹ 2890	2312		20
₹ 17500	21875	25	
₹ 38000	32300		15

Scan Your Brain

1.

C.P.	S.P.	Profit	Loss	Profit%	Loss%
₹ 2569	₹ 3082.8	₹ 513.8	X	20	X
₹ 38740	₹ 46488	₹ 7748	X	20.1	X
₹ 7200	₹ 8280	X	₹ 1080	X	15
₹ 16200	₹ 17982	₹ 1782	X	11	X
₹ 27,450	₹ 29,646	₹ 2196	X	8	X
₹ 2434	₹ 3115.52	₹ 681.52	X	28	X
₹ 28967	₹ 25490.96	X	₹ 3476.04	X	12

2. a) CP = ₹ 5520

Gain % = 2%

$\text{Gain} = 5520 \times \frac{2}{100}$

$= 110.4$

SP = 5520 + 110.4

= ₹ 5630.4

b) CP = ₹ 1250

Loss % = 6%

$\text{Loss} = 1250 \times \frac{6}{100}$

$= 75$

SP = 1250 – 75

= ₹ 1175

c) Total CP = 11700 + 300 + 900

= ₹ 12, 900

$\text{Gain} = 12900 \times \frac{10}{100}$

$= 1290$

SP = 12900 + 1290

= ₹ 14190

d) CP = 3040

Loss % = 12%

$P = 3040 \times \frac{12}{100}$

$= 364.8$

SP = 3040 + 364.8

= ₹ 3404.8

Hots Questions

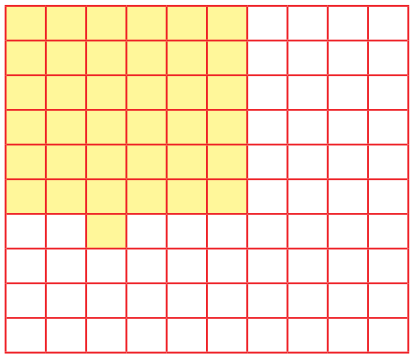
1. SP = ₹ 2,45,233
2. SP = ₹ 8308
3. SP = ₹ 324
4. Loss % = $\frac{50}{3}$ %

11 Percentage

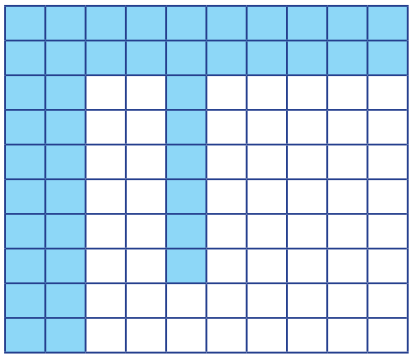
Answers

Practice Time

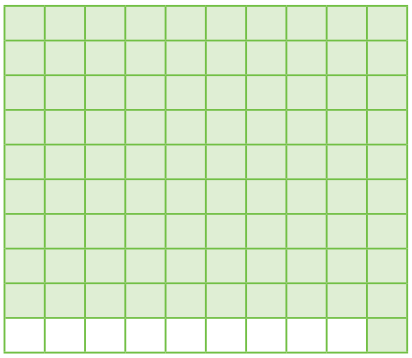
1.



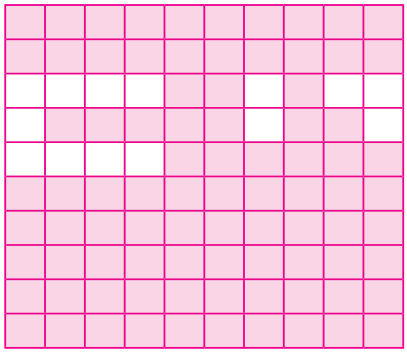
31% 69%



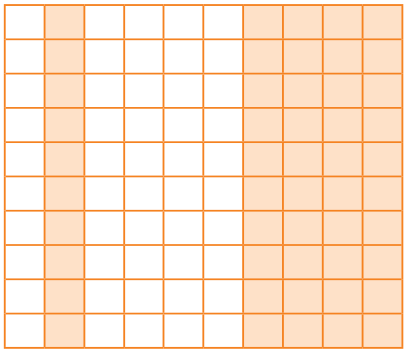
42% 58%



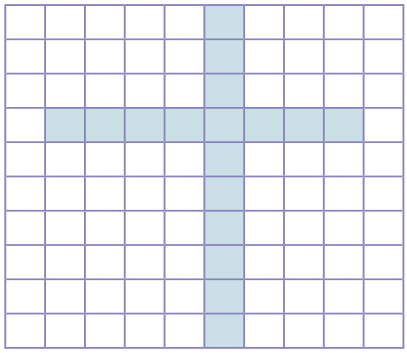
91% 9%



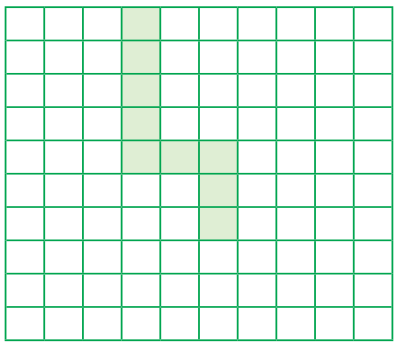
86% 14%



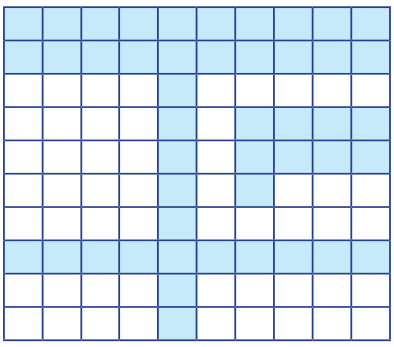
50% 50%



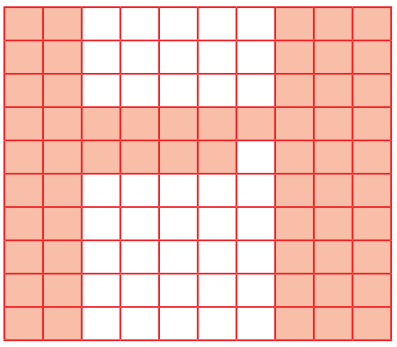
17% 83%



9% 91%

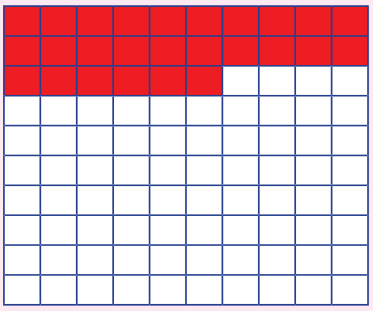


46% 54%

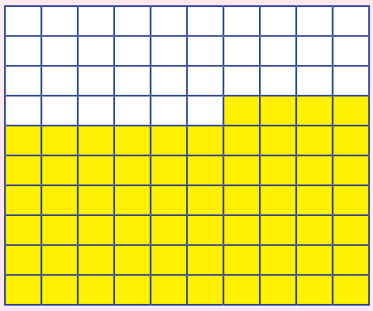


59% 41%

2.



26%



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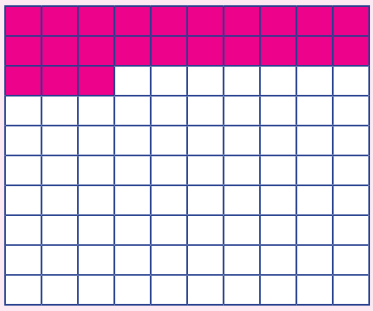

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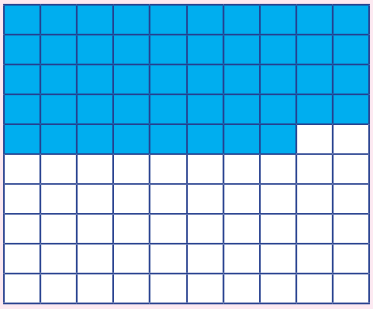

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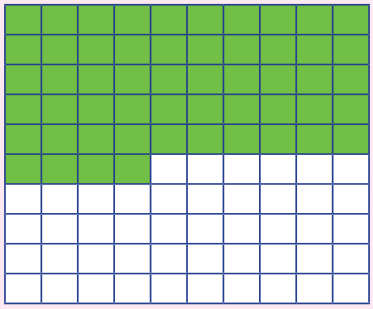

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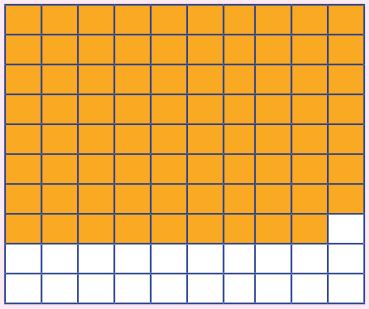
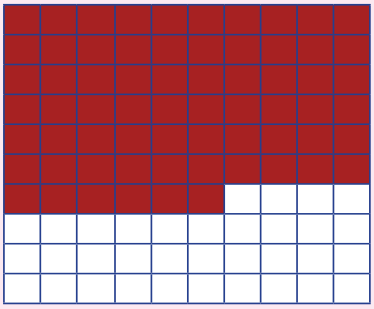
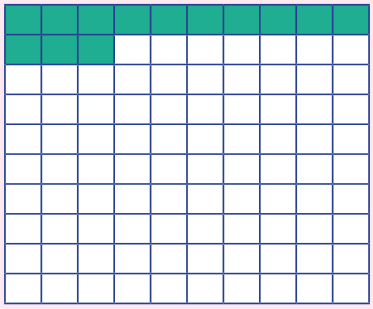


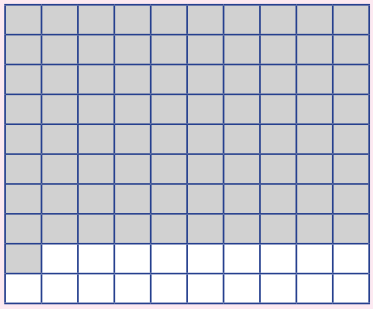
79%



66%



13%



81%

Practice Time

1. a) $\frac{10}{100}$, 0.10 b) $\frac{60}{100}$, 0.60 c) $\frac{42}{100}$, 0.42 d) $\frac{29}{100}$, 0.29

   e) $\frac{66}{100}$, 0.66 f) $\frac{77}{100}$, 0.77 g) $\frac{80}{100}$, 0.80 h) $\frac{22}{100}$, 0.22

   i) $\frac{50}{100}$, 0.50 j) $\frac{15}{100}$, 0.15 k) $\frac{75}{100}$, 0.75 l) $\frac{7}{100}$, 0.07

2. a) 2% b) 3% c) 7% d) 11% e) 25% f) 33%

   g) 61% h) 7% i) 93% j) 1% k) 15% l) 12%

   m) 23% n) 57% o) 98% p) 86% q) 32% r) 14%

3. a) 20% b) 95% c) 75% d) 66% e) 43% f) 10%

g) 5% h) 33% i) 60% j) 26% k) 1% l) 30%

m) 29% n) 2% o) 36% p) 80%

4. $\frac{24}{50} = \frac{24 \times 2}{50 \times 2} = \frac{48}{100} = 48\%$

$\frac{7}{20} = \frac{7 \times 5}{20 \times 5} = \frac{35}{100} = 35\%$

$\frac{9}{10} = \frac{9 \times 10}{10 \times 10} = \frac{90}{100} = 90\%$

$\frac{3}{5} = \frac{3 \times 20}{5 \times 20} = \frac{60}{100} = 60\%$

$\frac{12}{20} = \frac{12 \times 5}{20 \times 5} = \frac{60}{100} = 60\%$

$\frac{33}{50} = \frac{33 \times 2}{50 \times 2} = \frac{66}{100} = 66\%$

$\frac{11}{25} = \frac{11 \times 4}{25 \times 4} = \frac{44}{100} = 44\%$

$\frac{39}{50} = \frac{39 \times 2}{50 \times 2} = \frac{78}{100} = 78\%$

$\frac{3}{4} = \frac{3 \times 25}{4 \times 25} = \frac{75}{100} = 75\%$

$\frac{3}{4} = \frac{11 \times 4}{25 \times 4} = \frac{44}{100} = 44\%$

$\frac{2}{4} = \frac{2 \times 25}{4 \times 25} = \frac{50}{100} = 50\%$

$\frac{45}{50} = \frac{45 \times 2}{50 \times 2} = \frac{90}{100} = 90\%$

$1\frac{3}{10} = \frac{13 \times 10}{10 \times 10} = \frac{130}{100} = 130\%$

$1\frac{12}{25} = \frac{37 \times 4}{25 \times 4} = \frac{148}{100} = 148\%$

$2\frac{6}{10} = \frac{26 \times 10}{10 \times 10} = \frac{260}{100} = 260\%$

$\frac{13}{15} = \frac{13 \times 20}{15 \times 20} = \frac{260}{300} = \frac{260}{3}\%$

$1\frac{4}{5} = \frac{9 \times 20}{5 \times 20} = \frac{180}{100} = 180\%$

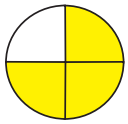
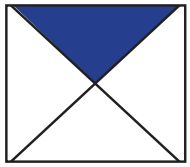
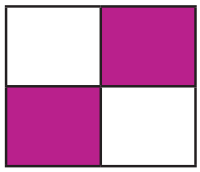
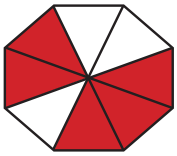
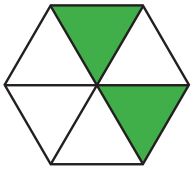
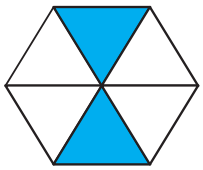
$2\frac{9}{20} = \frac{49 \times 5}{20 \times 5} = \frac{245}{100} = 245\%$

Practice Time

1. a) $\frac{14}{25}$ b) 36 c) 45 d) 72

e) 60 f) 28 g) 123 h) 1150

2.

Shaded Figure	Fraction	Decimal	Percentage
	$\frac{3}{4}$	0.75	75%
	$\frac{1}{4}$	0.25	25%
	$\frac{2}{4}$	0.50	50%
	$\frac{5}{8}$	0.625	62.5%
	$\frac{2}{6}$	0.333	33.3%
	$\frac{2}{6}$	0.333	33.3%

Percentage	Fraction	Decimal
25%	$\frac{1}{4}$	0.25
70%	$\frac{7}{10}$	0.7
5%	$\frac{1}{20}$	0.05
50%	$\frac{1}{2}$	0.5
14%	$\frac{7}{50}$	0.14
68%	$\frac{17}{25}$	0.68
80%	$\frac{4}{5}$	0.80
92%	$\frac{23}{25}$	0.92
165%	$\frac{33}{20}$	1.65
62.5%	$\frac{5}{8}$	0.625
421/2%	$\frac{421}{200}$	2.105
12.5%	$\frac{1}{8}$	0.125
80%	$\frac{4}{5}$	0.80
75%	$\frac{3}{4}$	0.75
27.5%	$\frac{11}{8}$	0.275

Scan Your Brain

1. a) 13272 p b) 1500 g c) 21500 m d) 200 ml e) 90 cm f) 1200 l

Hots Questions

a) $\frac{20}{100} = \frac{1}{5}$; $\frac{1}{5}$, $\frac{2}{10}$, $\frac{3}{15}$

b) $\frac{40}{100} = \frac{2}{5}$; $\frac{2}{5}$, $\frac{4}{10}$, $\frac{6}{15}$

c) $\frac{80}{100} = \frac{4}{5}$; $\frac{4}{5}$, $\frac{8}{10}$, $\frac{12}{15}$

12 Time

Answers

Practice Time

1. a) 1 year b) 60 minutes c) 1/2 d) 15 e) week
   f) day g) 1 year h) 1 i) 1 minute

2. a) 750 minutes; 45,000 seconds
   b) 3140 minutes; 188,400 seconds
   c) 2175 minutes; 130,500 seconds
   d) 1695 minutes; 101,700 seconds
   e) 930 minutes; 55,800 seconds
   f) 811 minutes; 48, 660 seconds
   g) $\frac{9931}{15}$ minutes; 39, 724 seconds
   h) $\frac{88981}{30}$ minutes; 177, 962 seconds
   i) $\frac{112357}{60}$ minutes; 112357 seconds
   j) 1380 seconds
   k) 1080 seconds
   l) $\frac{2257}{60}$ minutes; 2257 seconds
   m) $\frac{1334}{60}$ minutes; 1334 seconds
   n) 983 minutes; 58980 seconds

3. a) 2 min 19 sec b) 3 min 26 sec c) 6 min 3 sec d) 19 min 29 sec
   e) 33 min 3 sec f) 10 min 8 sec g) 34 min 8 sec h) 17 min 29 sec
   i) 17 min 48 sec

4. a) 204 hrs b) 294 hrs c) 173 hrs d) 10 hrs
   e) 6 hrs f) 96 hrs g) 13 hrs

5. a) 3 days b) 2 days 1 hr c) 4 days d) 4 days 4 hrs
e) 37 days 12 hrs f) 12 days 17 hrs g) 10 days 16 hrs
h) 2 days 12 hrs

6. a) 30 months b) 45 months c) 19 months d) 70 months
e) 113 months f) 104 months

7. a) 12 yrs b) 28 years 10 months c) 20 years
d) 1 year 8 months e) 1 year 2 month f) 11 years

Practice Time

1.

Starting Time	Elapsed Time	Finishing Time
1:05 PM	25 minutes	1: 30 PM
6:05 AM	3 hrs 17 min	9: 22 AM
10: 22 AM	1 hr 38 min	12: 00 PM
11: 51 AM	3 hrs 54 min	3:45 PM
3: 10 PM	8 hrs 25 min	11 : 35 PM
9: 06 AM	5 hrs 24 min	2: 30 PM

2.

Starting Date	Duration	Finishing date
19th March	22 days	10th April
2nd October	15 days	17th October
7th January	48 days	24th February
8th February	16 days	24th February (Leap Year)
16th March	26 days	11th April
19th July	48 days	5th September

3. a) Elapsed time = 3:07 – 2:03 = 37 minutes

b) Time for Smitha to remove the cake = 11:45 + 50 = 12:35 PM

c) Day & Time at which train reaches Delhi = 11:30 AM + 20hr 30min

= 8:00 AM (1st September)

d) Time at which Danny should start from Chandigarh to reach Delhi

= 3:45 PM – 5hr 15min = 10:30 AM

e) 4 months 2 days

f) Date on which Raima should buy her ticket = 12 Oct. – 60 days = 13 August

g) Raksha's age = April 21, 2017 – April 21, 2001 = 16 years old

h) 24 months 24 days

i) Radhika's leave = 15 days

Reema took longer leave than Radhika [21 – 15 = 6 days]

Practice Time

1. a) 26° C, 74° F b) 3° C, 40° F c) 10° C, 54° F d) 56° C, 96° F

e) 52° C, 126° F f) 62° C, 144° F

2. a) 95° F b) 68° F c) 113° F d) 185° F e) 221° F

3. a) 30° C b) 45° C c) 65° C d) 85° C e) 95° C

Scan Your Brain

1. a) 7:35 b) 1:05 c) 4:25 d) 9:30

2. a) 192.6 °F b) 58.9 °F

Hots Questions

1. 4:55 pm

13 Perimeter and Area of Squares and Rectangles

Answers

Practice Time

1. a) 14 cm b) 34 cm c) 36 cm d) 104 cm e) 76 cm

   f) 28 cm g) 26 cm h) 35.6 cm i) 11.2 cm j) 47.6 cm

Practice Time

1.

Length: 14 cm Breadth: 3 cm Perimeter: 34 cm Area: 42 square units	Length: 11 cm Breadth: 7 cm Perimeter: 36 cm Area: 77 square units	Length: 12 cm Breadth: 8 cm Perimeter: 40 cm Area: 96 square units
Length: 6 cm Breadth: 4 cm Perimeter: 20 cm Area: 24 square units	Length: 4 cm Breadth: 5 cm Perimeter: 18 cm Area: 20 square units	Length: 5 cm Breadth: 2 cm Perimeter: 14 cm Area: 10 square units
Length: 12 cm Breadth: 6 cm Perimeter: 36 cm Area: 72 square units	Length: 12 cm Breadth: 5 cm Perimeter: 34 cm Area: 60 square units	Length: 11 cm Breadth: 8 cm Perimeter: 38 cm Area: 88 square units
Length: 6 cm Breadth: 6 cm Perimeter: 24 cm Area: 36 square units	Length: 10 cm Breadth: 3 cm Perimeter: 26 cm Area: 30 square units	Length: 10 cm Breadth: 4 cm Perimeter: 28 cm Area: 40 square units

2. a) 9 cm^2 b) 16.81 cm^2 c) 51.84 cm^2 d) 88.36 cm^2

   e) 144 m^2 f) 196 km^2 g) 466.56 cm^2 h) 392.04 m^2

i) 12 cm^2 j) 16.8 cm^2 k) 24 cm^2 l) 2.8 cm^2

m) 24.5 m^2 n) 34.0 m^2 o) 144 cm^2 p) 66 cm^2

Practice Time

1. a) 8.5 sq. units b) 30 sq. units c) 24 sq. units d) 16 sq. units

   e) 27 sq. units f) 21 sq. units g) 10 sq. units h) 25 sq. units

2. a) 40 sq. units b) 38 sq. units c) 36 sq. units d) 40 sq. units

   e) 36 sq. units

3. a) Area = 54 cm^2; Perimeter = 40 cm b) Area = 61 cm^2; Perimeter = 39 cm
   c) Area = 52 cm^2 ; Perimeter = 56 cm

Scan Your Brain

1. 132.25 cm^2

2. 1171.2 cm^2

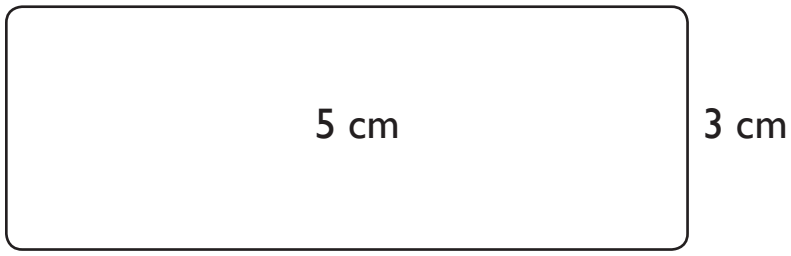
3. 40.96 cm^2

4. a)

27 sq. units
27 = (9 × 3) cm^2
l = 9 cm
b = 3 cm

1.

b)

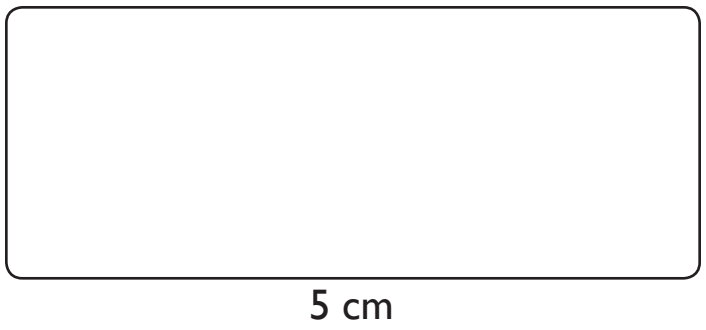


15 sq. units
15 = (3 × 5) cm^2
l = 3 cm
b = 5 cm

c)

35 sq. units
35 = (7 × 5) cm^2
l = 7 cm
b = 5 cm

d)



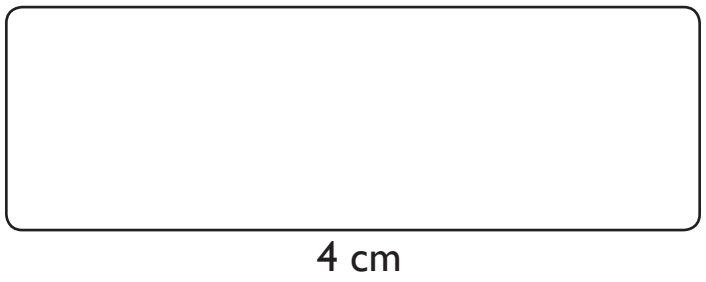
30 sq. units

$30 = (6 \times 5)\ cm^2$

l = 6 cm

b = 5 cm

e)



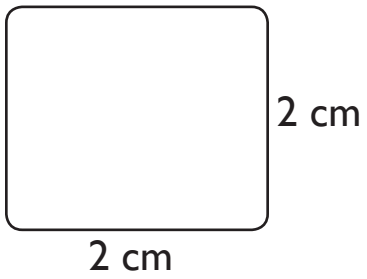
24 sq. units

$24 = (6 \times 4)\ cm^2$

l = 6 cm

b = 4 cm

5. a)

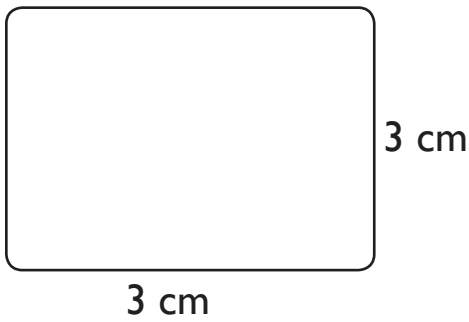


4 sq. units

Area = $(2 \times 2)\ cm^2$

a = 2 units

b)

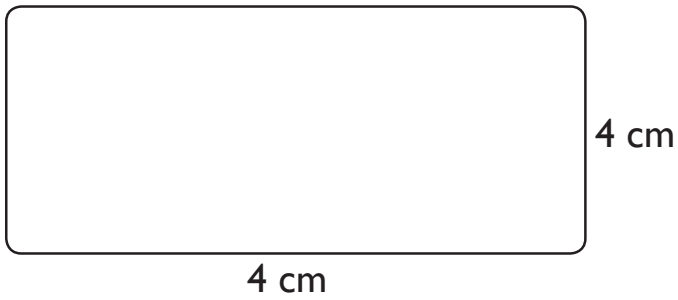


9 sq. units

Area = $(3 \times 3)\ cm^2$

a = 3 units

c)

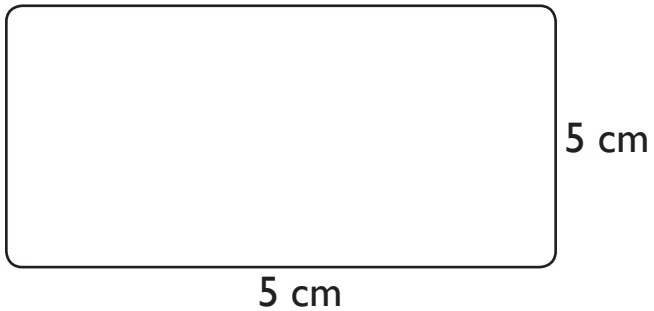


16 sq. units

Area = $(4 \times 4)\ cm^2$

a = 4 units

d)

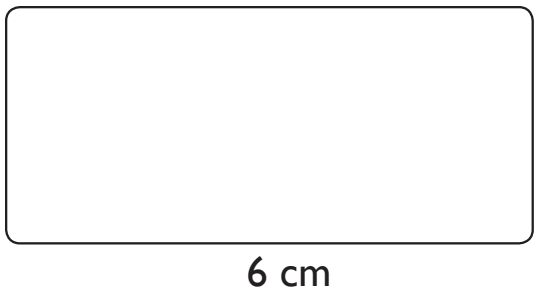


25 sq. units

Area = $(5 \times 5)\ cm^2$

a = 5 units

e)



36 sq. units

Area = (6 × 6) cm^2

a = 6 units

Hots Questions

1. 12 cm
2. 12 cm

14 Volume and Nets

Answers

Practice Time

1. a) 64 cm^3 b) 192 cm^3 c) 336 cm^3 d) 288 cm^3

   e) 312 cm^3 f) 384 cm^3 g) 384 cm^3 h) 240 cm^3

2. a) 8 cm^3 b) 12 cm^3 c) 10 cm^3 d) 11 cm^3 e) 15 cm^3

   f) 18 cm^3 g) 26 cm^3 h) 36 cm^3

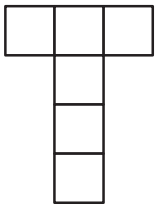
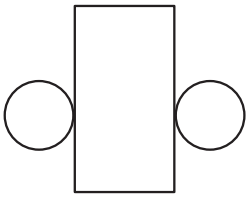
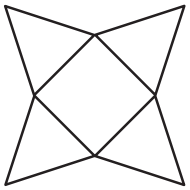
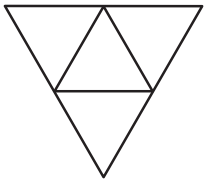
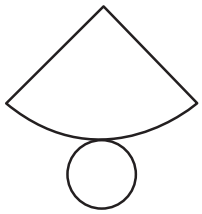
Practice Time

1.

Length	Breadth	Height	Volume
5 cm	6 cm	4 cm	120 cm^3
11 m	9 m	5 m	495 m^3
6 cm	2.5 cm	1.5 cm	22.5 m^3
7.2 m	2.1 m	1.5 m	22.68 m^3
11mm	5mm	7 mm	385 mm^3
15 cm	11 cm	15 cm	2475 cm^3
12 m	12m	12m	1728 m^3

2. a) Volume = 200 cm^3 b) Volume = 240 cm^3 c) Volume = 1000 cm^3
   d) Volume = 280 cm^3 e) Volume = 3375 cm^3 f) Volume = 160 cm^3
   g) Volume = 729 cm^3 h) Volume = 180 cm^3
3. a) 200 units b) 74.8 cm^3

Practice Time

1. a) 
   b) 
   c) 
   d) 
   e) 

Scan Your Brain

1. a) 210 cm^3 b) 3553 cm^3 c) 283.22 cm^3 d) 945 m^3
2. a) Volume = 15.625 cm^3 , Surface area = 37.5 cm^2
   b) Volume = 46.656 cm^3 , Surface area = 77.76 cm^2
3. a) Cube b) Pyramid c) Cube d) Cube
   e) Cylinder f) Triangular Pyramid g) Cone h) Square Pyramid

Hots Questions

Volume of cube = 480 cubes

15 Triangles

Answers

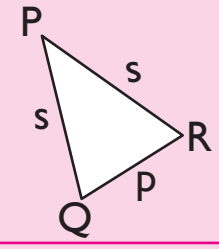
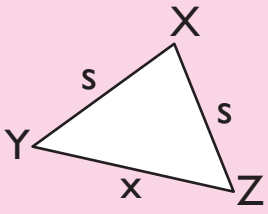
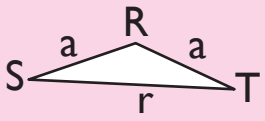
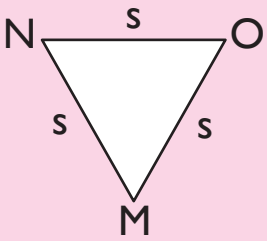
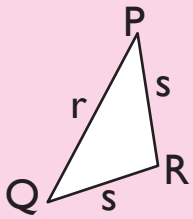
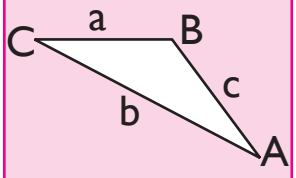
Practice Time

1.

Name of the triangle	Vertices	Sides	Angles
Δ PQR	P, Q, R	Isosceles triangle	Acute angled triangle
Δ XYZ	X, Y, Z	Scalene triangle	Right angled triangle
Δ ABC	A, B, C	Equilateral triangle	Acute angled triangle
Δ MNO	M, N, O	Equilateral triangle	Acute angled triangle
Δ ABC	A, B, C	Scalene triangle	Acute angled triangle
Δ PQR	P, Q, R	Isosceles triangle	Right angled triangle

Scan Your Brain

1.

Figure	Name	Angles	Triangle Type (By sides)	Triangle Type (By angles)
	Δ PQR	∠P, ∠Q, ∠R	Isosceles triangle	Acute angled triangle
	Δ XYZ	∠X, ∠Y, ∠Z	Isosceles triangle	Acute angled triangle
	Δ RST	∠R, ∠S, ∠T,	Isoceles triangle	Acute angled triangle
	Δ MNO	∠M, ∠N, ∠O	Equilateral triangle	Acute angled triangle
	Δ PQR	∠P, ∠Q, ∠R	Isoceles triangle	Obtuse angled triangle
	Δ ABC	∠A, ∠B, ∠C	Scalene triangle	Obtuse angled triangle

Hots Questions

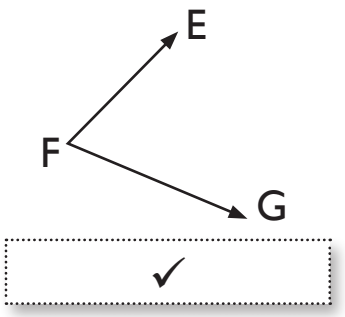
Do it yourself

16 Angles

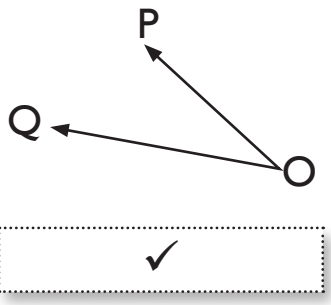
Answers

Practice Time

1.



✓



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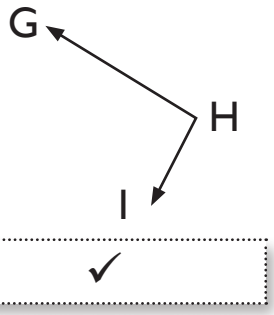

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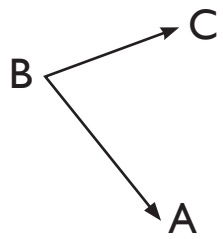
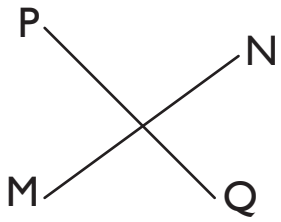


✓



✓

2. a) ∠POQ, ∠QOR, ∠ROS, ∠SOT, ∠TOV, ∠POR, ∠POS, ∠POT, ∠POV, ∠QOS, ∠QOT, ∠QOV, ∠ROT, ∠ROV, ∠SOV

b) ∠BAD, ∠ADC, ∠DCB, ∠CBA

c) ∠POQ, ∠POR, ∠QOR

d) ∠APD, ∠CPA, ∠CPB, ∠BPD

e) ∠PQR, ∠QRP, ∠RPQ

Practice Time

1. a) 35° b) 50° c) 75° d) 95° e) 115°

f) 80° g) 180° h) 45° i) 60°

2. a) 30°; Acute angle b) 100°; Obtuse angle c) 90°; Right angle

d) 45°; Acute angle e) 140°; Obtuse angle f) 65°; Acute angle

g) 120°; Obtuse angle

Scan Your Brain

a) ∠QRS = 60°, ∠PSR = 120°, ∠PQS = 60°, ∠QPS = 120°

b) ∠NMP = 60°, ∠MPO = 60°, ∠PON = 120°, ∠ONP = 120°

c) ∠BAF = 40°, ∠FED = 40°, ∠AFE = 260°, ∠ABC = 50°,

∠BCD = 100°, ∠CDE = 50°

d) ∠GJI = 110°, ∠HIJ = 110°, ∠JGH = 70°, ∠GHI = 70°

e) ∠PRQ = 60°, ∠PQR = 60°, ∠RPQ = 60°

f) ∠STV = 120°, ∠TUP = 110°, ∠UPO = 60°, ∠POR = 120°

∠ORS = 110°, ∠RST = 60°

g) ∠BCA = 130°, ∠CBA = 35°, ∠CAB = 15°

Hots Questions

1. 3 O' clock, 9 O' clock, 6:15, 12:15