

NEW ERA PUBLIC SCHOOL

CLASS: → 5th

SUBJECT: → MATH

SOLVED ASSIGNMENT OF

UNIT 2nd

SESSION 2021-2022

MATH 'A' [Ex = 2.1 - 2.7 and
Ex = 3.1]

Exercise: → 2.1

Q.No.1: → Find the sum of the following
and also mark the periods in the answers.

(a) TL L Th Th H T O
 6 5 8 9 2 1
 + 3 6 5 2 4 1
10,24,162

(b) L Th Th H T O
 4 5 6 3 2 4
 + 3 3 2 2 4
4,89,548

(c) TL L Th Th H T O
 9 9 9 9 9 9
 + 1 0 1 0 1 0
11,01,009

(d) TL L Th Th H T O
 6 9 7 4 5 2 3
 + 2 5 4 7 8 3 1
95,22,354

(e) C TL L Th Th H T O
 1 7 8 9 6 3 2 5
 + 3 6 2 5 8 7 0
2,15,22,195

Q.No.2: → Add the following.

(a) 3,25,896 + 4,58,636 + 2,05,505
Sol:

$$\begin{array}{r}
 3,25,896 \\
 4,58,636 \\
 + 2,05,505 \\
 \hline
 9,90,037
 \end{array}$$

(b) $15,689 + 85,756 + 2,345$

sol:

$$\begin{array}{r}
 15,689 \\
 85,756 \\
 + 2,345 \\
 \hline
 1,03,790
 \end{array}$$

(c) $99,63,112 + 5,04,663 + 75,423$

sol:

$$\begin{array}{r}
 99,63,112 \\
 5,04,663 \\
 + 75,423 \\
 \hline
 1,05,43,198
 \end{array}$$

(d) $4,63,48,909 + 55,23,412 + 7,85,332 :$

sol:

$$\begin{array}{r}
 4,63,48,909 \\
 55,23,412 \\
 + 7,85,332 \\
 \hline
 5,26,57,653
 \end{array}$$

Q.No.3: → Find the answers in each of the following.

(a) 32,323 more than 9,56,023

sol:

$$\begin{array}{r}
 9,56,023 \\
 + 32,323 \\
 \hline
 9,88,346
 \end{array}$$

(b) 6 hundreds more than 5,84,023

Sol:
$$\begin{array}{r} 5,84,023 \\ + 600 \\ \hline 5,84,623 \end{array}$$

(c) 90,00,900 more than 78,63,665

Sol:
$$\begin{array}{r} 78,63,665 \\ + 90,00,900 \\ \hline 1,68,64,565 \end{array}$$

(d) 1,11,111 more than 98,98,989

Sol:
$$\begin{array}{r} 98,98,989 \\ + 1,11,111 \\ \hline 1,00,10,100 \end{array}$$

Q.No.4: → Find the missing digits in each of the following.

(a)
$$\begin{array}{r} 64\boxed{6}68 \\ + \boxed{3}38\boxed{6}4 \\ \hline 9\boxed{8}532 \end{array}$$

(b)
$$\begin{array}{r} 58661 \\ + 123\boxed{2}3 \\ \hline 7\boxed{0}\boxed{9}84 \end{array}$$

(c)
$$\begin{array}{r} 63425\boxed{6}7 \\ + 27\boxed{3}1434 \\ \hline 9\boxed{0}7\boxed{4}00\boxed{1} \end{array}$$

(d)
$$\begin{array}{r} 7\boxed{2}36088 \\ + 134\boxed{2}52\boxed{3} \\ \hline 85\boxed{7}86\boxed{1}1 \end{array}$$

Q.No.5: → Solve the following word problems:

(a) Question on book.

Sol: Ms Rao purchased a house for: ₹ 53,20,430

Amount spend on Whitewashing: ₹ 59,000.

Amount spend on Furniture: ₹ 11,20,290

∴ Total amount spend on a New house
by Ms Rao = 53,20,430 + 59,000 +
11,20,290

$$\begin{array}{r}
 = 53,20,430 \\
 59,000 \\
 + 11,20,290 \\
 \hline
 ₹ 64,99,720
 \end{array}$$

(b) Question on book.

Sol: Cars produced in 2007 = 1,27,695
 Cars produced in 2008 = 98,895
 Cars produced in 2009 = 3,05,789

∴ Total no. of cars produced in three successive years:-

$$\begin{array}{r}
 1,27,695 \\
 98,895 \\
 + 3,05,789 \\
 \hline
 5,32,379
 \end{array}$$

Most no. of cars were produced in the year 2009.

(c) Question on book.

Sol: Mr Jain purchased a bike for = ₹ 14,35,690

Amount spend on accessories = ₹ 35,975.

Amount spend on registration, insurance, and road tax = ₹ 46,760.

∴ Total amount he had to pay for the bike =

$$\begin{array}{r}
 14,35,690 \\
 35,975 \\
 + 46,760 \\
 \hline
 ₹ 15,18,425
 \end{array}$$

Exercise :-> 2.2

Q.No. 1 :-> Subtract the following and mark the periods in the answers.

(a) $634568 - 392709$

Sol: L Th Th H T O

$$\begin{array}{r} 634568 \\ - 392709 \\ \hline 2,41,859 \end{array}$$

(b) L Th Th H T O

$$\begin{array}{r} 487694 \\ - 209856 \\ \hline 2,77,838 \end{array}$$

(c) TL L Th Th H T O

$$\begin{array}{r} 9203683 \\ - 176458 \\ \hline 90,27,225 \end{array}$$

(d) C TL L Th Th H T O

$$\begin{array}{r} 53698703 \\ - 32769482 \\ \hline 2,09,29,221 \end{array}$$

(e) C TL L Th Th H T O

$$\begin{array}{r} 99563272 \\ - 45263130 \\ \hline 5,43,00,142 \end{array}$$

Q.No.2: → Subtract each of the following and check the answer.

(a) 6,71,209

$$\begin{array}{r} 6,71,209 \\ - 3,21,345 \\ \hline 3,49,864 \end{array}$$

Check: → 3,49,864

$$\begin{array}{r} 3,49,864 \\ + 3,21,345 \\ \hline 6,71,209 \end{array}$$

(b) 78,00,000

$$\begin{array}{r} 78,00,000 \\ - 65,47,000 \\ \hline 12,53,000 \end{array}$$

Check: → 12,53,000

$$\begin{array}{r} 12,53,000 \\ + 65,47,000 \\ \hline 78,00,000 \end{array}$$

(c) 7,36,86,364

$$\begin{array}{r} 7,36,86,364 \\ - 4,58,92,556 \\ \hline 2,77,93,808 \end{array}$$

Check: → 2,77,93,808

$$\begin{array}{r} 2,77,93,808 \\ + 4,58,92,556 \\ \hline 7,36,86,364 \end{array}$$

(d) 8,63,45,858

$$\begin{array}{r} 8,63,45,858 \\ - 3,54,86,742 \\ \hline 5,08,59,116 \end{array}$$

Check: → 5,08,59,116

$$\begin{array}{r} 5,08,59,116 \\ + 3,54,86,742 \\ \hline 8,63,45,858 \end{array}$$

Q.No.3: → Find the differences on subtracting the following.

(a)
$$\begin{array}{r} 54,201 \\ - 22,873 \\ \hline 31,328 \end{array}$$
 [22,873 from 54,201]

(b)
$$\begin{array}{r} 2,75,852 \text{ from } 5,54,996 \\ \text{sol: } \begin{array}{r} 5,54,996 \\ - 2,75,852 \\ \hline 2,79,144 \end{array} \end{array}$$

(c)
$$\begin{array}{r} 77,77,777 \text{ from } 89,89,899 \\ \text{sol: } \begin{array}{r} 89,89,899 \\ - 77,77,777 \\ \hline 12,12,122 \end{array} \end{array}$$

(d)
$$\begin{array}{r} 3,46,85,369 \text{ from } 7,55,36,566 \\ \text{sol: } \begin{array}{r} 7,55,36,566 \\ - 3,46,85,369 \\ \hline 4,08,51,197 \end{array} \end{array}$$

Q.No.4: → Find the missing digits in each of the following.

(a)
$$\begin{array}{r} 4 \ 7 \ 5 \ \boxed{4} \ 6 \\ - 1 \ 8 \ \boxed{6} \ 3 \ 5 \\ \hline \boxed{2} \ 8 \ 9 \ 1 \ 1 \end{array}$$

(b)
$$\begin{array}{r} 2 \ 7 \ 4 \ 5 \ 0 \\ - 1 \ \boxed{6} \ 5 \ \boxed{8} \ 2 \\ \hline \boxed{1} \ 0 \ 8 \ 6 \ \boxed{8} \end{array}$$

(c)
$$\begin{array}{r} 6 \ 5 \ \boxed{6} \ 5 \ \boxed{4} \\ - 2 \ 8 \ 7 \ 2 \ 5 \\ \hline \boxed{3} \ 7 \ 2 \ \boxed{2} \ 9 \end{array}$$

(d)
$$\begin{array}{r} 7 \ \boxed{0} \ 9 \ 0 \ 8 \ \boxed{0} \ 6 \ 0 \\ - \boxed{3} \ 8 \ 7 \ 5 \ \boxed{3} \ 4 \ 9 \ 2 \\ \hline 3 \ 2 \ \boxed{1} \ 5 \ 4 \ 5 \ 6 \ \boxed{0} \end{array}$$

Q.No.5: → Solve the following Word Problems.

(a) Question on book.

Sol: No. of tyres produced by a factory in the month of May = 8,10,240

No. of defective tyres = 4,328

∴ No. of tyres that were not defective =

$$\begin{array}{r} 8,10,240 \\ - 4,328 \\ \hline 8,05,912 \end{array}$$

(b) Question on book.

Sol: Total population of a town = 28,76,543

No. of males in the town = 15,42,678

∴ Total no. of females in the town =

$$\begin{array}{r} 28,76,543 \\ - 15,42,678 \\ \hline 13,33,865 \end{array}$$

(c) Question on book.

Sol: 75,23,625

+ 22,34,374

97,57,999

6,12,76,343

- 97,57,999

5,15,18,344

Exercise :-> 2.3

Q.No.1:-> Find the following products.

(a) 33652 x 6

Sol:
$$\begin{array}{r} 33652 \times 6 \\ \hline 201912 \end{array}$$

(c) 412307 x 9

Sol:
$$\begin{array}{r} 412307 \times 9 \\ \hline 3710763 \end{array}$$

(e) 8514032 x 16

$$\begin{array}{r}
 \text{sol:} \quad 8514032 \times 16 \\
 51084192 \\
 8514032 \times \\
 \hline
 136224512
 \end{array}$$

Q.No.2: → Multiply the following.

$$(a) \quad 12462 \times 88$$

$$\begin{array}{r}
 \text{sol:} \quad 12462 \times 88 \\
 99696 \\
 99696 \times \\
 \hline
 1096656
 \end{array}$$

$$(d) \quad 357452 \times 86$$

$$\begin{array}{r}
 \text{sol:} \quad 357452 \times 86 \\
 2144712 \\
 2859616 \times \\
 \hline
 30740872
 \end{array}$$

$$(g) \quad 43082 \times 265$$

$$\begin{array}{r}
 \text{sol:} \quad 43082 \times 265 \\
 215410 \\
 258492 \times \\
 86164 \times \times \\
 \hline
 11416730
 \end{array}$$

$$(j) \quad 28796 \times 5601$$

$$\begin{array}{r}
 \text{sol:} \quad 28796 \times 5601 \\
 28796 \\
 00000 \times \\
 172776 \times \times \\
 143980 \times \times \times \\
 \hline
 161206396
 \end{array}$$

Q.No.3: $\rightarrow$ Solve the following word problems.

(a) Question on book.

Sol: 1 day = 24 hours

1 common year = 365 days

$\therefore$ No. of hours in a year = 365×24

1460

730x

8,760 hrs

(b) Question on book

Sol: No. of spectators came for watching the show = 32,145

Amount paid by each spectator = ₹ 350

Total amount of money collected by the circus event organizers = $32,145 \times 350$

00000

160725x

96435xx

1,12,50,750

(c) Question on book.

Sol: No. of buckets manufactured in a week = 5,263

4 months = 16 weeks

$\therefore$ Total no. of buckets manufactured in 4 months = $5,263 \times 16$

31578

5263x

84,208

Exercise: $\rightarrow$ 2.4

Q.No.1: $\rightarrow$ Multiply the following.

(a) 30×600

Sol:
$$\begin{array}{r} 3 \times 6 \\ \hline 18000 \end{array}$$

[Multiply the non-zero digits then put as many 0's as there are in the number]

(d) $30 \times 40 \times 500$

Sol:
$$\begin{aligned} & 3 \times 4 \times 5 \\ &= 12 \times 5 \\ &= 6,00,000 \end{aligned}$$

[Multiply the non-zero digits then put as many 0's as there are in the no.]

(f) 886×300

Sol:
$$\begin{array}{r} 886 \times 3 \\ \hline 2,65,800 \end{array}$$

(i) $663 \times 5,000$

Sol:
$$\begin{array}{r} 663 \times 5 \\ \hline 33,15,000 \end{array}$$

Q.No.2 : $\rightarrow$ Write the missing multiplicands in each of the following.

(a) $\underline{90} \times 70 = 6300$

(b) $\underline{800} \times 60 = 48,000$

(c) $\underline{8000} \times 40 = 3,20,000$

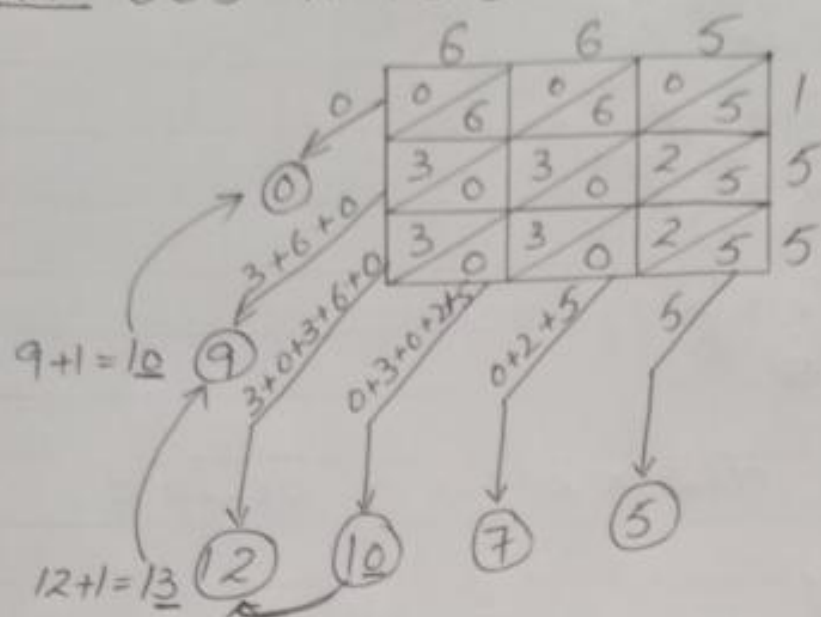
(d) $\underline{9000} \times 90 = 8,10,000$

(e) $\underline{700} \times 800 = 5,60,000$

Q.No.3 : $\rightarrow$ Multiply the following using Lattice multiplication.

(a) 412×214

(d) 665×155



The product of $665 \times 155 = 1,03,075$

Exercise: $\rightarrow 2.5$

Q.No.1: $\rightarrow$ Find the quotients and check the answers in each of the following.

(a) $1,81,756 \div 7$

Sol:

$$\begin{array}{r}
 025965 \\
 7 \overline{) 1,81,756} \\
 \underline{0} \\
 18 \\
 \underline{14} \\
 41 \\
 \underline{35} \\
 67 \\
 \underline{63} \\
 45 \\
 \underline{42} \\
 36 \\
 \underline{35} \\
 1
 \end{array}$$

Verification = Dividend = Divisor $\times$ Quotient + Remainder

$$\begin{aligned}
 &= 7 \times 25965 + 1 \\
 &= 1,81,755 + 1 \\
 &= 1,81,756
 \end{aligned}$$

(c) $55,03,214 \div 8$

Sol:

$$\begin{array}{r}
 0687901 \\
 8 \overline{) 55,03,214} \\
 \underline{0} \\
 55 \\
 \underline{48} \\
 70 \\
 \underline{64} \\
 63 \\
 \underline{56} \\
 72 \\
 \underline{72} \\
 0014 \\
 \underline{8} \\
 6
 \end{array}$$

Verification :- Dividend = Divisor $\times$ Quotient + Remainder.

$$\begin{aligned}
 &= 8 \times 687901 + 6 \\
 &= 5503208 + 6 \\
 &= 55,03,214
 \end{aligned}$$

(e) $45,63,278 \div 15$

Sol:

$$\begin{array}{r}
 30421 \\
 15 \overline{) 45,63,278} \\
 \underline{45} \\
 0063 \\
 \underline{60} \\
 32 \\
 \underline{30} \\
 27
 \end{array}$$

$$\begin{array}{r}
 15 \\
 120 \\
 \underline{120} \\
 8
 \end{array}$$

Verification :- Dividend = Divisor $\times$ Quotient + Remainder.

$$= 15 \times 304218 + 8$$

$$= 4563270 + 8$$

$$= 45,63,278$$

Q.No.2 :- $\rightarrow$ Find the quotients and remainders, and also check the answers in each of the following.

(a) $63,357 \div 18$

Sol:

$$\begin{array}{r}
 3519 \\
 18 \overline{) 63,357} \\
 \underline{54} \\
 93 \\
 \underline{90} \\
 35 \\
 \underline{18} \\
 177 \\
 \underline{162} \\
 15
 \end{array}$$

Verify :- Dividend = Divisor $\times$ Quotient + Remainder.

$$= 18 \times 3519 + 15$$

$$= 63,342 + 15$$

$$= 63,357$$

(d) $22,58,697 \div 42$

sol:

$$\begin{array}{r}
 053778 \\
 42 \overline{) 22,58,697} \\
 \underline{00} \\
 225 \\
 \underline{210} \\
 158 \\
 \underline{126} \\
 326 \\
 \underline{294} \\
 329 \\
 \underline{294} \\
 357 \\
 \underline{336} \\
 21
 \end{array}$$

Verification :- Dividend = Divisor $\times$ Quotient + Remainder.

$$= 42 \times 53778 + 21$$

$$= 2258676 + 21$$

$$= 22,58,697$$

Q.No.3:- Find the quotients and remainders, and also check the answers in each of the following.

a) $6,25,794 \div 125$

sol:

$$\begin{array}{r}
 005006 \\
 125 \overline{) 6,25,794} \\
 \underline{625} \\
 0794 \\
 \underline{750} \\
 44
 \end{array}$$

Verify :- Dividend = Divisor $\times$ Quotient + Remainder.

$$= 125 \times 5006 + 44$$

$$= 6,25,750 + 44$$

$$= 6,25,794$$

(d) $6,90,842 \div 145$

Sol:

$$\begin{array}{r}
 004764 \\
 145 \overline{) 6,90,842} \\
 \underline{580} \\
 1108 \\
 \underline{1015} \\
 934 \\
 \underline{870} \\
 642 \\
 \underline{580} \\
 62
 \end{array}$$

Verify :- Dividend = Divisor $\times$ Quotient + Remainder.

$$\begin{aligned}
 &= 145 \times 4764 + 62 \\
 &= 6,90,780 + 62 \\
 &= 6,90,842
 \end{aligned}$$

Q.No.4: $\rightarrow$ Solve the following Word problems.

(a) Question on book.

Sol: Total no. of friends = 7

Total no. of coloured beads = 76,892

$\therefore$ No. of beads got by each friend = $76,892 \div 7$

$$\begin{array}{r}
 10984 \\
 7 \overline{) 76,892} \\
 \underline{7} \\
 68 \\
 \underline{63} \\
 59 \\
 \underline{56} \\
 32 \\
 \underline{28} \\
 4
 \end{array}$$

4

Beads got by each friend = 10,984
 No. of beads left over = 4.

(b) Question on book.

Sol: Total no. of apples = 52,098

Total no. of boxes = 16

$\therefore$ No. of apples to be packed in each box = $52,098 \div 16 = 3256$

$$\begin{array}{r}
 3256 \\
 16 \overline{) 52,098} \\
 \underline{48} \\
 40 \\
 \underline{32} \\
 89 \\
 \underline{80} \\
 98 \\
 \underline{96} \\
 2
 \end{array}$$

No. of apples left over = 2

(c) Question on book

Sol: Total no. of stickers to be distributed = 3,06,390.

Total no. of students in class = 30

$\therefore$ Stickers got by each student =

$$3,06,390 \div 30 = 10,213$$

$$\begin{array}{r}
 10213 \\
 30 \overline{) 3,06,390} \\
 \underline{30} \\
 63 \\
 \underline{60} \\
 39 \\
 \underline{30}
 \end{array}$$

$$\begin{array}{r} 90 \\ 90 \\ \hline \times \end{array}$$

No, there won't be any stickers left.

Q. No. 5: → Divide the following.

(a) $96325 \div 10$

Sol: When we have to perform $96325 \div 10$ There is 1 '0' in the divisor. The digit in the dividend at the ones place will become the remainder and the rest of the digits will form the quotient.
Therefore, Quotient = 9632, Remainder = 5.

(d) $235476 \div 100$

Sol: When we have to perform $235476 \div 100$ There are 2 '0s' in the divisor. The digit in the dividend at the tens and ones place will become the remainder and rest of the digits will form the Quotient.
Therefore, Quotient = 2354, Remainder = 76

(h) $77456982 \div 1000$

Sol: When we have to perform $77456982 \div 1000$. There are 3 '0s' in the divisor. The digit in the dividend at the hundreds, tens and ones place will become remainder and rest of the digits will form the quotient.
Therefore, Quotient = 77456, Remainder = 982.

Exercise 2.6: →

Q. No. 1: → Question on book.

Sol: No. of visitors visited on Sunday =

= Two lakh sixty-three thousand nine hundred and fifty-three.

Visitors visited on Monday = Four lakh and thirty-three thousand.

Visitors visited on Tuesday = Three lakh twenty thousand six hundred and fifty-six.

$\therefore$ Total no. of visitors visited in these three days =

$$\begin{array}{r} 2,63,953 \\ 4,33,000 \\ + 3,20,656 \\ \hline 10,17,609 \end{array}$$

Ten lakh seventeen thousand six hundred and nine.

(b) Question on book.

Sol: No. of books bought for primary section of the school library = 12,685

No. of books bought for middle section of the school library = 15,790

No. of books bought for senior section of the school library = 13,698.

$\therefore$ Total no. of books bought =

$$\begin{array}{r} 12,685 \\ 15,790 \\ + 13,698 \\ \hline 42,173 \end{array}$$

(c) Question on book.

Sol: No. of bricks used for Mr Sharma's house = 1,75,692.

No. of bricks used for Mr Verma's house = 2,16,785.

Masons used more bricks for Mr. - Verma's house.

$\therefore$ No. of more bricks used in Mr verma's

$$\begin{array}{r}
 \text{house then Mr Sharma's house} = 2,16,785 \\
 - 1,75,692 \\
 \hline
 41,093
 \end{array}$$

(d) Question on book.

Sol: Greatest 6-digit number = 9,99,999

Smallest 8-digit number = +1,00,00,000

$\therefore$ Addition of both numbers = 1,09,99,999

(e) Question on book.

Sol: Total no. of people travel in one month = 1,23,498.

Fare paid by each traveller = ₹ 32.

$\therefore$ Total money collected in a month =

$$\begin{array}{r}
 1,23,498 \times 32 \\
 246996 \\
 370494 \times \\
 \hline
 ₹ 39,51,936
 \end{array}$$

(f) Question on book

Sol: Total no. of pages in the dictionary = 3,215

No. of Words arranged in each page = 215

$\therefore$ Total no. of Words in the whole dictionary = 3,215 x 215

$$\begin{array}{r}
 16075 \\
 3215 \times \\
 6430 \times \times \\
 \hline
 6,91,225
 \end{array}$$

(g) Question on book.

Sol: Total no. of tickets to be sold = 25,90,480

Total no. Singing concerts = 358
 $\therefore$ No. of people that will be there in each Singing concert = $25,90,488 \div 358$

$$\begin{array}{r}
 0007236 \\
 358 \overline{) 25,90,488} \\
 \underline{25 \ 06} \\
 844 \\
 \underline{716} \\
 1288 \\
 \underline{1074} \\
 2148 \\
 \underline{2148} \\
 X
 \end{array}$$

= 7236.

Exercise 2.7 : $\rightarrow$

Q.No. 1 : $\rightarrow$ Find the actual and estimated answers.

(a) Question on book.

Sol: Money transferred from Leena's bank account = ₹ 35,405.

Money left in Leena's bank account = ₹ 50,236

$\therefore$ Money that was there in Leena's bank account before transfer =

Actual amount	Estimated amount
50,236	50,000
+ 35,405	+ 35,000
<u>₹ 85,641</u>	<u>₹ 85,000</u>

(b) Question on book.

Sol: Stamps collected by Meena last year = 15,785

No. of stamps gifted to her = 4,290

∴ Total no. of stamps she has now =	
Actual Number	Estimated Number
15,785	16,000
+ 4,290	+ 4,000
<u>20,075 stamps</u>	<u>20,000 stamps</u>

(c) Question on book.

sol: Value of Deewan's mutual fund decreased by = ₹ 2,89,638

Worth of Deewan's mutual fund before the decrease = ₹ 6,23,899

∴ Worth of Deewan's mutual fund now =	
Actual Worth	Estimated Worth
6,23,899	6,00,000
- 2,89,638	- 3,00,000
<u>₹ 3,34,261</u>	<u>₹ 3,00,000</u>

(d) Question on book.

sol: No. of cars produced by the factory = 18,426.

No. of 18,426 cars produced in = 1 month.

1 year = 12 months

∴ No. of cars produced in a year =

Actual Number	Estimated number
18,426 × 12	18,000 × 10
36852	06000
<u>18426 ×</u>	<u>18000 ×</u>
<u>2,21,112 cars</u>	<u>180000 cars</u>

(e) Question on book.

sol: Total no. of families = 16

Cost of the trip = ₹ 2,16,352

∴ Amount paid by each family =

Actual Amount

$$2,16,352 \div 16$$

$$\begin{array}{r}
 013522 \\
 16 \overline{) 2,16,352} \\
 \underline{16} \\
 56 \\
 \underline{48} \\
 83 \\
 \underline{80} \\
 35 \\
 \underline{32} \\
 32 \\
 \underline{32} \\
 0 \\
 \times
 \end{array}$$

$$= ₹ 13,522$$

Estimated Amount

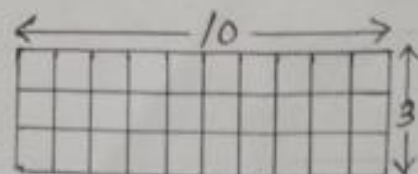
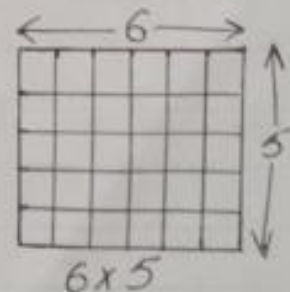
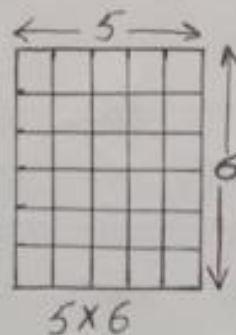
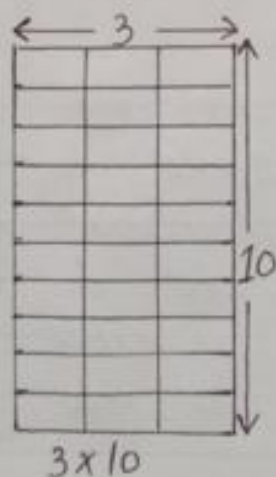
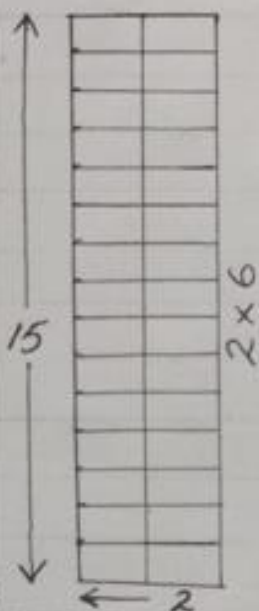
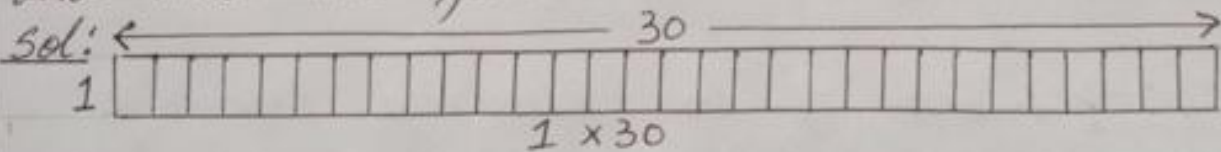
$$2,00,000 \div 20$$

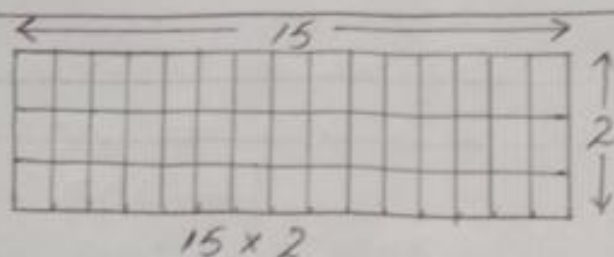
$$\begin{array}{r}
 10,000 \\
 20 \overline{) 2,00,000} \\
 \underline{20} \\
 0 \\
 \times \\
 = ₹ 10,000
 \end{array}$$

Exercise 3.1 :→

Q.No.1:→ Use a squared lined paper to draw each of the following.

(a) all possible rectangles of 30 square units and find the factors of 30.





Factors of 30:-

$$1 \times 30 = 30$$

$$2 \times 15 = 30$$

$$3 \times 10 = 30$$

$$5 \times 6 = 30$$

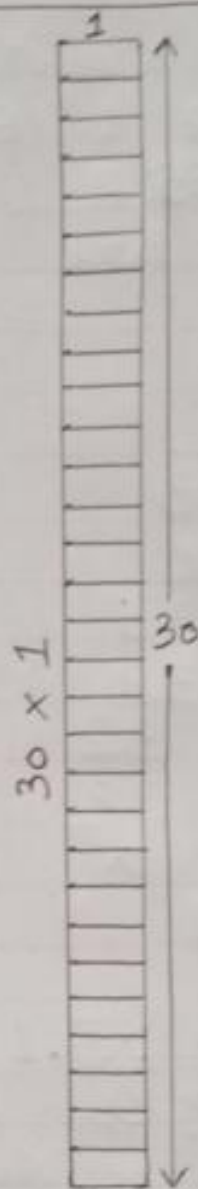
$$6 \times 5 = 30$$

$$10 \times 3 = 30$$

$$15 \times 2 = 30$$

$$30 \times 1 = 30$$

Therefore, factors of 30 are 1, 2, 3, 5, 6, 10, 15 and 30.



(b) Practice Part (b) yourself.

Q.No. 2: $\rightarrow$ Which of the following numbers are divisible by 2? What kind of numbers are they?

Sol: (a) 2,204 — Yes, it's divisible by 2

(b) 1,444 — Yes, it's divisible by 2.

(c) 5,631 — No, it's not divisible by 2.

(d) 7,932 — Yes, it's divisible by 2.

(e) 8,657 — No, it's not divisible by 2.

The numbers that are divisible by 2 are even numbers.

Q.No. 3: $\rightarrow$ Find the number divisible by 3 in the

following.

(a) $9,903 = 9 + 9 + 0 + 3 = 21$, Yes, its divisible by 3. [$\because$ Sum of all digits of the no. are divisible by 3]

(b) $4,750 = 4 + 7 + 5 + 0 = 16$, No, its not divisible by 3. [$\because$ Sum of all digits of the no. are not divisible by 3]

(c) $3,146 = 3 + 1 + 4 + 6 = 14$, No, its not divisible by 3 [$\because$ Sum of all digits of the no. are not divisible by 3]

(d) $4,123 = 4 + 1 + 2 + 3 = 10$, No, its not divisible by 3 [$\because$ Sum of all digits of the no. are not divisible by 3].

(e) $8,103 = 8 + 1 + 0 + 3 = 12$, Yes, its divisible by 3 [$\because$ Sum of all digits of the no. are divisible by 3].

Q.No. 4 : $\rightarrow$ Check whether 9 is a factor of the given numbers.

(a) $1,079 = 1 + 0 + 7 + 9 = 17$, No, its not a factor of 9 because sum of all the digits is not divisible by 9.

(b) $7,835 = 7 + 8 + 3 + 5 = 23$, No, its not a factor of 9 because sum of all the digits is not divisible by 9.

(c) $3,402 = 3 + 4 + 0 + 2 = 9$, Yes, its a factor of 9 because sum of all the digits is divisible by 9.

(d) $7,763 = 7+7+6+3 = 23$, No, it's not a factor of 9 because the sum of all digits is not divisible by 9.

(e) $3,321 = 3+3+2+1 = 9$, Yes, it's a factor of 9 because the sum of all the digits is divisible by 9.

Q.No. 5 : $\rightarrow$ Check the divisibility by 2, 3, 5, 9, 10 and 11 of the following numbers.

Number	Divisibility by					
	2	3	5	9	10	11
(a) 3,258	Yes	Yes	No	Yes	No	No
(b) 7,236	Yes	Yes	No	Yes	No	No
(c) 10,005	No	Yes	Yes	No	No	No
(d) 63,052	Yes	No	No	No	No	Yes
(e) 44,286	Yes	Yes	No	No	No	Yes
(f) 7,23,850	Yes	No	Yes	No	Yes	No

Q.No. 6 : $\rightarrow$ Explain the following statements with suitable reasons.

(a) If a number is divisible by 3, will it also be divisible by 9?

sol: Since 9 is divisible by 3, every number divisible by 9 will also be divisible by 3. This happens because in the divisibility test formula of 9, the sum of the digits should be divisible by 9. If the sum is divisible by 9, it automatically is divisible by 3.

(b) If a number is divisible by 10, will it also be divisible by 5?

sol: Numbers that are divisible by 10 need to be even and divisible by 5, because

the prime factors of 10 are 5 and 2. Basically, this means that for a number to be divisible by 10, the last digit must be a 0, so, this number is even and divisible by 5. That means that it is also divisible by 10.

MATHS 'B' [Ex = 7.7 and Chapter 8]

Definitions :->

- 1) Circles :-> A circle is a closed figure made up of a curved line.
- 2) Circumference :-> It is the distance around the circle.
- 3) Radius :-> The distance between the centre and any point on the circumference.
- 4) Diameter :-> The line passing through the centre joining any two points on the circumference is the diameter.
- 5) Chord :-> The distance between one point of the circumference to another point of the circumference.
- 6) Arc :-> A part of the circumference of a circle is called an arc.
- 7) Interior and exterior of a Circle :-> The area enclosed by the circumference is called the interior of the circle. The area outside the circumference is called the exterior of the circle.

8) Semicircle $\rightarrow$ A diameter divides the circle into two equal halves.

Exercise. 7.7 $\rightarrow$

Q.No. 1 $\rightarrow$ Answer the following questions.

(a) How many radii can you draw in one given circle? Infinite

(b) How many diameters can you draw in one given circle? Infinite

(c) Is diameter a chord? Yes

(d) Is chord a diameter? No

(e) What is the relationship of a radius and a diameter in a given circle?

Sol: Radius of a circle is half of diameter.

Q.No. 2 $\rightarrow$ Fill in the blanks.

(a) There is only one center in a circle.

(b) The distance around a circle is called Circumference

(c) An Arc is named by 3 points.

(d) Half of a circle is called a Semi-circle

Q.No. 3 $\rightarrow$ Draw a circle with radius 4.5 cm.

On it mark and name.

(a) the centre (b) a radius

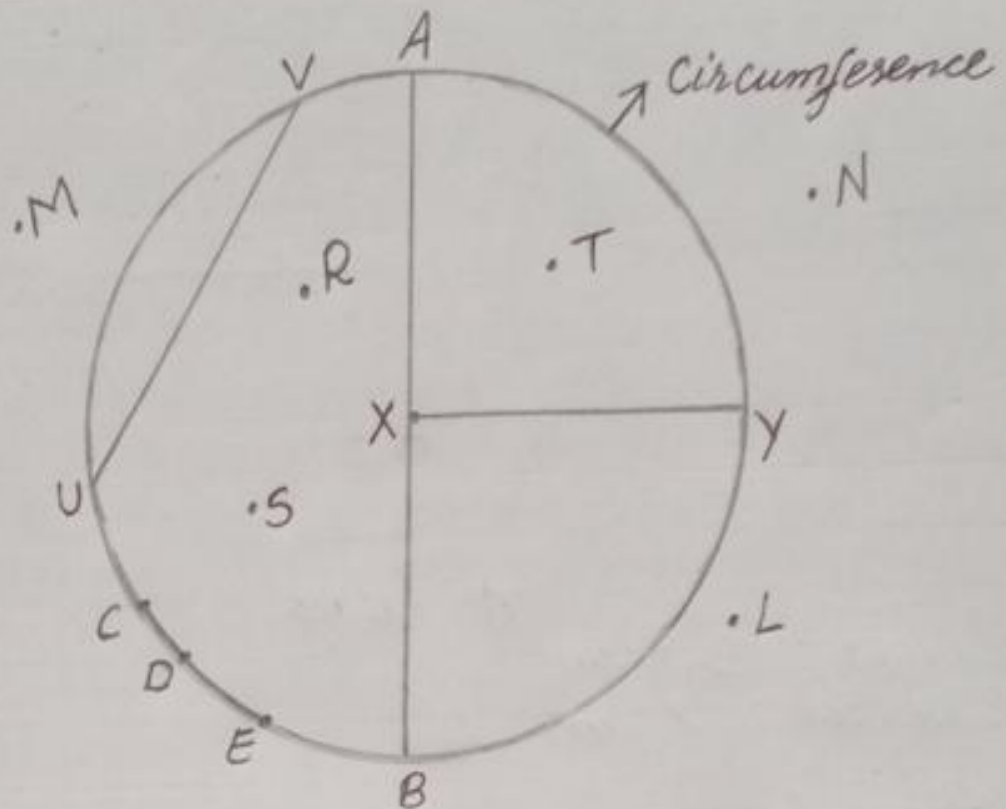
(c) a diameter (d) a chord

(e) an arc

(f) the circumference

(g) points R, S, and T in the interior of the circle.

(h) points L, M, and N in the exterior of the circle.



(a) the centre : O

(b) a radius : XY

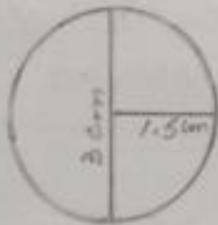
(c) a diameter : AB

(d) a chord : UV

(e) an arc : CDE

Q.No. 4: → Draw circles of different sizes using different circular things - for example coin, lid of a bottle, and glass and find the length of its radius and diameter

Sol: (a)



Coin

Radius : 1.5 cm

Diameter : 3 cm



Bottle lid

Radius : 2 cm

Diameter : 4 cm



A glass

Radius : 3.5 cm

Diameter : 7 cm.

Formula :→

1) Perimeter of a rectangle : $2 [\text{length} + \text{Breadth}]$
 $= 2 [L + b]$

2) Perimeter of a square : Sum of all sides
 $= S + S + S + S$
 $= 4S$
 $= 4 \times \text{Side}.$

Exercise 8.1 :→

Q.No.1 :→ The length and breadth of some rectangles are given. Find their perimeter using the formula.

(a) $l = 3.5 \text{ m}$, $b = 3 \text{ m}$.

Sol: Perimeter of a rectangle $= 2 [\text{length} + \text{breadth}]$
 $= 2 [L + b]$
 $= 2 [3.5 + 3]$
 $= 2 \times 6.5$
 $= 13 \text{ m}$

(c) $l = 5.8 \text{ m}$, $b = 3 \text{ m}$

Sol: Perimeter of a rectangle = $2[\text{length} + \text{breadth}]$
 $= 2[L + b]$
 $= 2[5.8 + 3]$
 $= 2 \times 8.8$
 $= 17.6 \text{ m.}$

Q.No. 2: $\rightarrow$ The sides of some squares are given. Find their perimeters using formula.

(a) Side = 15 cm.

Sol: Perimeter of a square = $4S$
 $= 4 \times \text{Side.}$
 $= 4 \times 15$
 $= 60 \text{ cm.}$

(c) Side = 125 m.

Sol: Perimeter of a square = $4S$
 $= 4 \times \text{Side}$
 $= 4 \times 125$
 $= 500 \text{ m.}$

Q.No. 3: $\rightarrow$ The sides of some triangles are given. Find the perimeter of the triangles.

(a) 6 cm, 5 cm, and 4 cm.

Sol: Perimeter of a triangle = Sum of its 3 sides.
 $= 6 + 5 + 4$
 $= 15 \text{ cm.}$

(c) 5.2 cm, 7.8 cm and 6 cm

Sol: Perimeter of a triangle = Sum of its 3 sides.
 $= 5.2 + 7.8 + 6$
 $= 19 \text{ cm.}$

Q.No. 4: $\rightarrow$ The breadth and perimeter of a

rectangle are 8cm and 64cm. Find the length of the rectangle.

Sol: Breadth = 8cm Perimeter = 64cm

$$\text{Perimeter of a rectangle} = 2[L + b]$$

$$64 = 2[L + 8]$$

$$\frac{64}{2} = L + 8$$

$$32 = L + 8$$

$$32 - 8 = L$$

$$24 = L$$

$$\therefore \text{length} = 24 \text{ cm.}$$

Q.No.5: → Raghav walks around a square park whose side is 72m. If he walks a round park six times, how much distance did he walk in all.

Sol: Perimeter of the square Park = $4 \times \text{Side}$

$$= 4 \times 72$$

$$= 288 \text{ m}$$

Distance covered by Raghav = 6×288

$$= 1,728 \text{ m.}$$

Q.No.6: → Find the third side of the triangle if the perimeter of that triangle is 20m and two of its sides are 8m and 4m.

Sol: Perimeter of a triangle = Sum of all 3 sides

$$\text{perimeter} = 8 + 4 + x$$

$$20 = 12 + x$$

$$x = 20 - 12$$

$$\therefore x = 8$$

Q.No.7: → The perimeter of a square is twice the perimeter of a rectangle. If the perimeter of the square is 60cm and the breadth of

the rectangle is 3cm then find the length of the rectangle?

Sol: Perimeter of square = 60cm

Breadth of rectangle = 3cm

We know that perimeter of rectangle = $2[L+b]$

According to question perimeter of square is twice the perimeter of rectangle.

So,

$$60 = 2\{2[L+b]\}$$

$$60 = 2\{2[L+3]\}$$

$$60 = 2\{2L+6\}$$

$$60 = 4L+12$$

$$4L = 60-12$$

$$4L = 48$$

$$L = \frac{48}{4} = 12$$

$\therefore$ length of rectangle = 12cm.

Q.No.8: $\rightarrow$ Find the perimeter of the following.

(a) Your pencil box.

Sol: Length = 17cm

breadth = 2cm

Perimeter of rectangle = $2[L+b]$

$$= 2[17+2]$$

$$= 2 \times 19$$

$$= 38 \text{ cm.}$$

(b) Your maths exercise book.

Sol: length = 27cm

breadth = 1.5cm.

Perimeter of a rectangle = $2[L+b]$

$$= 2[27+1.5]$$

$$= 2 \times 28.5$$

$$= 57 \text{ cm.}$$

(c) The top of your table

Sol: length = 54cm

breadth = 2cm.

Perimeter of a rectangle = $2[L+b]$

$$= 2[54+2]$$

$$= 2 \times 56$$

$$= 112 \text{ cm.}$$

Exercise 8.2 :->

Definition :->

Area :-> The amount of surface covered by a figure is known as the area of the figure.

Formula :->

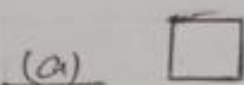
1) Area of a rectangle = Length $\times$ Breadth
 $= L \times B$

2) Area of a square = Side $\times$ Side
 $= (\text{Side})^2$

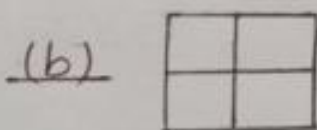
3) Area of a triangle = $\frac{1}{2}$ of area of the rectangle.

Exercise 8.2 :->

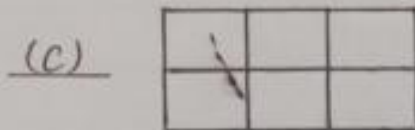
Q.No.1 :-> Find the area of each of the following figures by counting squares. Each square has an area of 1 square cm.



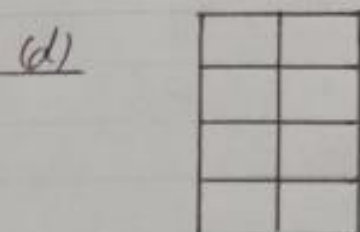
1 Sq. cm



4 Sq. cm



6 Sq. cm



8 Sq. cm

Q.No.2 :-> Find the area of each figure given above by using the formula.

Sol: (a) Area of a Square = $(S)^2$
 Side = 1 cm
 $\therefore$ Area = $(1)^2$
 $= 1 \text{ sq.cm.}$

(b) Side = 2 cm.
 Area of a Square = $(\text{Side})^2$
 $= (2)^2$
 $= 4 \text{ sq.cm.}$

(c) Area of a rectangle = $L \times B$
 length = 3 cm
 Breadth = 2 cm
 $\therefore$ Area = 3×2
 $= 6 \text{ sq.cm.}$

(d) length = 2 cm
 Breadth = 4 cm
 Area of a rectangle = $L \times B$
 $= 2 \times 4$
 $= 8 \text{ sq.cm.}$

Q.No.3 $\rightarrow$ Find the area of each rectangle with the following measurements.

(a) length = 9 cm Breadth = 7 cm

Sol: Area of a rectangle = length $\times$ Breadth
 $= 9 \text{ cm} \times 7 \text{ cm}$
 $= 63 \text{ sq.cm}$

(c) length = 12.8 m Breadth = 9 m

Sol: Area of a rectangle = length $\times$ Breadth
 $= 12.8 \times 9$
 $= 115.2 \text{ sq.m.}$

Q.No.4 $\rightarrow$ Find the sides of square with

the given area.

(a) Area = 64 square m.

Sol: Area = Side $\times$ Side

64 = Side $\times$ Side

Think of a number which when multiplied by itself gives 64.

We know that $8 \times 8 = 64$

$\therefore$ Side of the square = 8 m.

(b) Area = 100 square cm.

Sol: Area = Side $\times$ Side

100 = Side $\times$ Side

Think of a number which when multiplied by itself gives 100

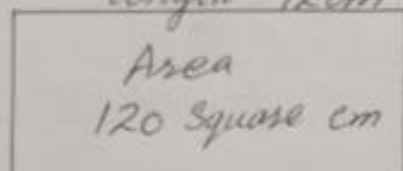
We know that $10 \times 10 = 100$

$\therefore$ Side of the square = 10 square cm.

Q. No. 5: $\rightarrow$ Find the missing measurement in each of the following.

(a)

length 12cm



Breadth
?

Sol: Area of a rectangle = length $\times$ Breadth

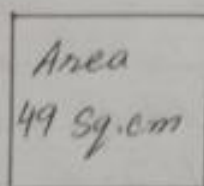
$$120 = 12 \times B$$

$$10 \overline{) 120} = B$$

$$121$$

$\therefore$ Breadth = 10 cm.

(c)



side ?

Sol: Area of a square = (Side)²

$$49 = (\text{Side})^2$$

Think of a number which when multiplied by itself gives 49
 We know that $7 \times 7 = 49$
 $\therefore$ Side of the square = 7 cm.

Q.No. 6 $\rightarrow$ Solve the following.

(a) A rectangle has a length of 12 cm and the width is 3 times smaller. What is the area of the rectangle?

Sol: Length = 12 cm

$$\text{Width} = 12 \times \frac{1}{3}$$

$$= 4 \text{ cm}$$

$$\begin{aligned} \text{Area of a rectangle} &= \text{Length} \times \text{Breadth} \\ &= 12 \times 4 \\ &= 48 \text{ square cm} \end{aligned}$$

(b) The area of a square is 25 square cm. What is the area of 5 such squares?

Sol: As Area of a rectangle = 25 sq. cm

$$\begin{aligned} \text{Area of 5 such rectangles} &= 5 \times 25 \\ &= 125 \text{ sq. cm} \end{aligned}$$

(c) The area of a square is 4 square cm. What is the area of a figure formed by 20 such squares?

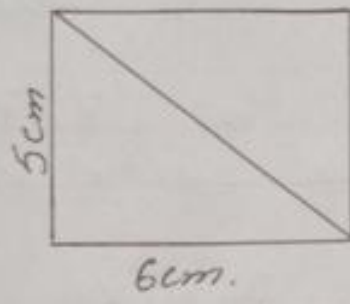
Sol: As Area of a square = (Side)²

$$\begin{aligned} \text{Area of a figure formed by 20 such rectangles} &= 4 \times 20 \\ &= 80 \text{ square cm.} \end{aligned}$$

Exercise 8.3 $\rightarrow$

Q.No. 1 $\rightarrow$ Find the area of the following given below.

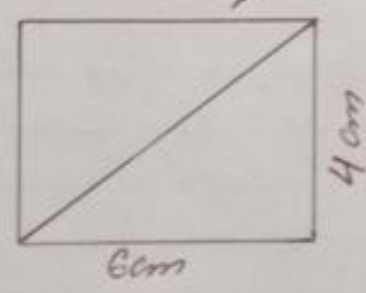
(a)



Sol: Area of a rectangle = length $\times$ Breadth
 $= 6 \times 5$
 $= 30 \text{ Sq. cm.}$

Area of a triangle = $\frac{1}{2} \times \text{length} \times \text{Breadth}$
 $= \frac{1}{2} \times 6 \times 5$
 $= \frac{1}{2} \times 30$
 $= 15 \text{ Sq. cm}$

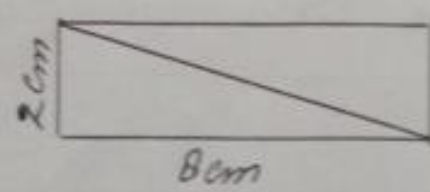
(b)



Sol: Area of a rectangle = length $\times$ Breadth
 $= 6 \times 4$
 $= 24 \text{ Sq. cm}$

Area of a triangle = $\frac{1}{2} \times \text{length} \times \text{Breadth}$
 $= \frac{1}{2} \times 6 \times 4$
 $= \frac{1}{2} \times 24$
 $= 12 \text{ Sq. cm.}$

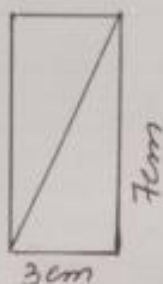
(c)



Sol: Area of a rectangle = length $\times$ Breadth
 $= 8 \times 2$
 $= 16 \text{ sq. cm}$

Area of a triangle = $\frac{1}{2} \times \text{length} \times \text{Breadth}$
 $= \frac{1}{2} \times 8 \times 2$
 $= \frac{1}{2} \times 16$
 $= 8 \text{ sq. cm.}$

(d)



Sol: Area of a rectangle = length $\times$ Breadth
 $= 7 \times 3$
 $= 21 \text{ sq. cm}$

Area of a triangle = $\frac{1}{2} \times \text{length} \times \text{Breadth}$
 $= \frac{1}{2} \times 7 \times 3$
 $= \frac{1}{2} \times 21 = \frac{21}{2}$

$$\begin{array}{r} 10.5 \\ 2 \overline{) 21} \\ \underline{20} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

$= 10.5 \text{ sq. cm.}$

Exercise 8.4: →

Q.No. 1: → Find the area of the figures given below. (Each square = 1 square . cm)

(a)

	1	2	3	4	
5	6	7	8	9	
10	11	12	13	14	15

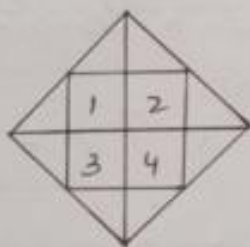
Sol: Number of Whole squares = 15
 As the area of each square is 1 cm^2 ,
 the approximate area of this figure is
 15 square .cm.

(c)

1	2	3
4	5	6
7	8	9

Sol: Number of Whole squares = 9
 As the area of each square is 1 cm^2 ,
 the approximate area of this figure is
 9 square .cm.

(e)



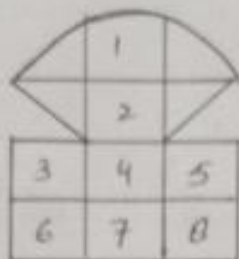
Sol: Number of Whole squares = 4
 Number of half-squares = 8 = 4 Whole -
 Squares.

$$\text{Total area} = 4 + 4 \\ = 8 \text{ Squares.}$$

As the area of each square is 1 cm^2 ,
 the approximate area of the figure is
 8 square .cm.

(f)

(f)



Sol: Number of Whole squares = 8
 Number of half squares = 4 = 2 squares
 Total area = $8 + 2$
 $= 10$ squares.

As the area of each square is 1 cm^2 ,
 the approximate area of the figure is
 10 square cm .

Definition : $\rightarrow$

Volume : $\rightarrow$ The amount of space taken
 by a solid is known as its volume.

Formula : $\rightarrow$

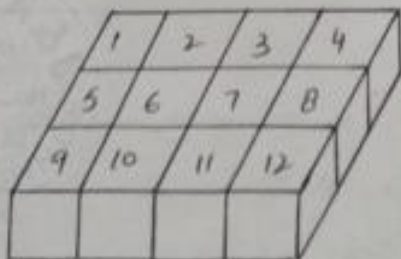
1) Volume of a cuboid = length $\times$ Breadth $\times$ Height
 $\therefore V = L \times B \times H$

2) Volume of a cube = Side $\times$ Side $\times$ Side.
 $\therefore V = S \times S \times S$.

Exercise 8.5 : $\rightarrow$

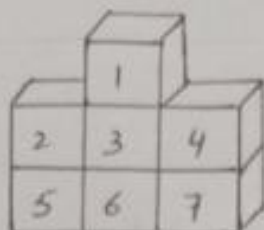
Q.No.1 : $\rightarrow$ Find the volumes of the following
 by counting the blocks of cubes.

(a)

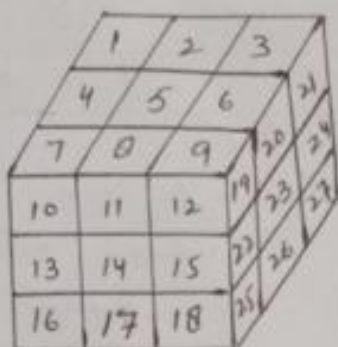


12 cubic unit.

(c)

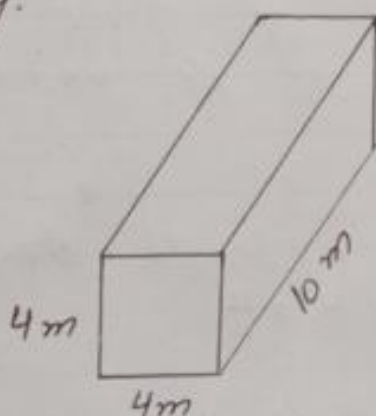
7 cubic unit

(e)

27 cubic unit

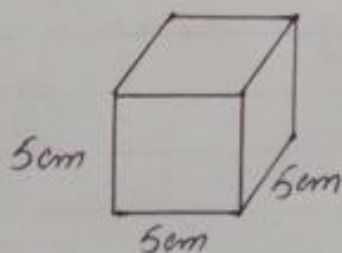
Q.No. 2: → Calculate the volumes of the following.

(a)



Sol: Volume of a Cuboid = $L \times B \times H$
 $= 4 \times 10 \times 4$
 $= 160 \text{ cubic . m.}$

(c)



Sol: Volume of a cube = $3 \times 5 \times 5$
 $= 5 \times 5 \times 5$
 $= 125 \text{ cubic cm.}$

Q.No.3: → Match the following.

(a) $L = 5, b = 4, h = 3$
 $= 60 \text{ cm}^3$

(i) 240 (c)

(b) $L = 48, b = 36, h = 24$
 $= 41,472$

(ii) 3,000 (d)

(c) $L = 12, b = 5, h = 4$
 $= 240$

(iii) 60 (a)

(d) $L = 50, b = 30, h = 2$
 $= 3,000$

(iv) 41,472 (b)

Q.No.4: → Calculate the volume for each of the following.

	Area	Height	Volume.
(a)	25 Sq.m	5m	<u>125 m³</u>

Sol: Area = 25 Sq.m
 Height = 5m

∴ Volume = Area × Height
 $= 25 \times 5$
 $= 125 \text{ cubic m.}$

	Area	Height	Volume
(b)	148 cm ²	16cm	<u>2368 cm³</u>

Sol: Area = 148 cm²
 Height = 16 cm

∴ Volume = Area × Height
 $= 148 \times 16$
 $= 2,368 \text{ cubic cm}$

	Area	Height	Volume
(c)	16 m ²	4m	<u>64 m³</u>

Sol: Area = 16 m²
 Height = 4m

∴ Volume = Area × Height
 $= 16 \times 4$

$$= 64 \text{ m}^3.$$

(d)	Area	Height	Volume
	210 m^2	35 m	$7,350 \text{ m}^3$

Sol: Area = 210 m^2
 Height = 35 m
 $\therefore \text{Volume} = \text{Area} \times \text{Height}$
 $= 210 \times 35$
 $= 7,350 \text{ cubic . m}$

Q.No. 5: $\rightarrow$ Fill in the missing entry in each of the following.

(a)	Length	Breadth	Height	Volume
	8 m	10 m	7 m	560 m^3

Sol: Height = $\frac{\text{Volume}}{\text{Length} \times \text{Breadth}}$
 $= \frac{560}{8 \times 10} = \frac{560}{80} = 7$
 $\therefore \text{Height} = 7 \text{ m}.$

(b)	Length	Breadth	Height	Volume
	5 cm	12 cm	8 cm	480 cm^3

Sol: Length = $\frac{\text{Volume}}{\text{Breadth} \times \text{Height}}$
 $= \frac{480}{12 \times 8} = \frac{480}{96} = 5$
 $\therefore \text{Length} = 5 \text{ cm}.$

(c)	Length	Breadth	Height	Volume
	9 cm	9 cm	9 cm	729 cm^3

Sol: Volume = Length $\times$ Breadth $\times$ Height
 $= 9 \times 9 \times 9$
 $\therefore \text{Volume} = 729 \text{ cm}^3$

(d)	length	Breadth	Height	Volume
	12.5 m	10 m	4 m	500 m ³

Sol: $\text{Height} = \frac{\text{Volume}}{\text{length} \times \text{Breadth}}$

$$= \frac{500}{12.5 \times 10} = \frac{500}{125} = 4.$$

$\therefore \text{Height} = 4 \text{ m}.$

Q.No. 6 : $\rightarrow$ Solve the following problems.

(a) Question on book.

Sol: length of the box = 20 cm.

Breadth of the box = 14 cm.

Height of the box = 10 cm.

$\therefore \text{Volume of the box} = \text{length} \times \text{Breadth} \times \text{Height}$

$$= 20 \times 14 \times 10$$

$$= 2800 \text{ cubic cm}.$$

(b) length of Samir's lunch box = 8 cm.

Breadth of Samir's lunch box = 5 cm.

Height of Samir's lunch box = 4 cm.

$\therefore \text{Volume of Samir's lunch box} = L \times B \times H$

$$= 8 \times 5 \times 4$$

$$= 160 \text{ cm}^3.$$

length of Sarani's lunch box = 10 cm.

Breadth of Sarani's lunch box = 4 cm.

Height of Sarani's lunch box = 2 cm.

$\therefore \text{Volume of Sarani's lunch box} = L \times B \times H$

$$= 10 \times 4 \times 2$$

$$= 80 \text{ cm}^3.$$

$\therefore$ Samir's lunch box has bigger volume.

(c) Question on book.

Sol: length of the Wall = 10 m

Breadth of the Wall = 5 m

Height of the Wall = 2 m.

$$\begin{aligned}\therefore \text{Volume of the Wall} &= L \times B \times H \\ &= 10 \times 5 \times 8 \\ &= 400 \text{ cubic m.}\end{aligned}$$

(d) Question on book.

Sol: Side of a cube = 8.8 cm.

$$\begin{aligned}\therefore \text{Volume of the cube} &= S \times S \times S \\ &= 8.8 \times 8.8 \times 8.8 \\ &= 681.472 \text{ cubic cm.}\end{aligned}$$

(e) Question on book.

Sol: Base area of cuboid = 300 square m.

Volume of cuboid = 3000 cubic m

Height of cuboid = ?

$$L \times B \times H = \text{Volume}$$

$$L \times B \times H = 3000$$

$$300 \times H = 3000$$

$$H = \frac{103000}{300}$$

$$\therefore \text{Height of cuboid} = 10 \text{ m.}$$