

NEW ERA PUBLIC SCHOOL 2021

Subject:- Mathematics "A" Class:- 4th

Topic:- Large Numbers

Exercise:- 1.1

Solved Assignment of Unit I 2021

Qno.1:- Write the given numbers in a place value chart and give the place value of the coloured digits.

a, 756320 b, 34369 c, 96325 d, 858625

Sol,

	L	TTh	Th	H	T	O
a,	<u>7</u>	5	6	3	2	0
b,		3	4	<u>3</u>	6	9
c,		9	6	3	<u>2</u>	5
d,	8	<u>5</u>	8	6	2	5

Sol a, The place value of the coloured digit in 756320 = 700,000.

b, The place value of the coloured digit in 34369 = 300.

c, The place value of the coloured digit in 96325 = 20.

d, The place value of the coloured digit in 858625 = 50,000.

Qno.2:- Mark the periods by placing the commas and write the names of the given numbers.

a, 23654.

(P.T.O)

(2)

Sol, 23,654

Twenty Three Thousand six hundred and fifty four.

b, 96325

Sol, 96,325

Ninety six thousand three hundred and Twenty five.

c, 403256

Sol, 4,03,256

Four lakh Three Thousand Two hundred and fifty six.

d, 356987

Sol, 3,56,987

Three lakh fifty six Thousand nine hundred and eighty seven.

Qno.3:- Write the numerals for the given names with the help of a place value chart.

a, Thirty-two thousand five hundred and sixteen.

Sol, 32516.

b, Seven lakh forty-Three Thousand and seventy five.

Sol, 7,43,075.

c, Eighty-nine Thousand eight hundred and ninety.

Sol, 89,890

Qno.5:- Name the places in the thousands period.

Sol, Ten thousands and thousands

Qno.6:- Name the period which comes before
(P.T.O)

The lakhs period.

Sol, Thousands period.

Qno.7:- Write the smallest 5-digit number in words.

Sol, The smallest five-digit number = 10000 i.e.
Ten thousand.

Qno.8:- Write the greatest 7-digit number in figures by separating periods.

Sol, The greatest 7-digit number = 99,99,999

Qno.9. Complete the number patterns.

a, 76594, 76694, 76794, 76894, 76994, 77094.

b, 102359, 112359, 122359, 132359, 142359, 152359.

c, 276102, 286102, 296102, 306102, 316102, 326102.

Qno.10:- Write four consecutive numbers coming just after 32065.

Sol. Four consecutive numbers just after 32065
= 32066, 32067, 32068, 32069.

b, Write five consecutive numbers coming just before 23658.

Sol, Five consecutive numbers just before
23658 = 23653, 23654, 23655, 23656, 23657.

Qno.11:- Answer the following questions for the number 56987.

a, Write the place value of the digit 5.

Sol, The place value of the digit 5 = 50,000

b, Write the place value of the digit 8.

Sol, The place value of the digit 8 = 80.

(4)
c, write the digit whose place value is 6000.
sol, The digit whose place value is 6000 = 6.

Exercise 1.2

Topic:- Expanded Form and Standard Form

Qno.1:- write the following in expanded form.

a, 47250.

$$\begin{aligned}\text{sol, } 47250 &= 4 \times 10000 + 7 \times 1000 + 2 \times 100 + 5 \times 10 + 0 \\ &= 40000 + 7000 + 200 + 50 + 0\end{aligned}$$

b, 752953.

$$\begin{aligned}\text{sol, } 752953 &= 7 \times 100000 + 5 \times 10000 + 2 \times 1000 + 9 \times 100 + \\ &5 \times 10 + 3 \times 1. \\ &= 700000 + 50000 + 2000 + 900 + 50 + 3\end{aligned}$$

c, 64787.

$$\begin{aligned}\text{sol, } 64787 &= 6 \times 10000 + 4 \times 1000 + 7 \times 100 + 8 \times 10 + 7 \times 1 \\ &= 60000 + 4000 + 700 + 80 + 7.\end{aligned}$$

d, 285905.

$$\begin{aligned}\text{sol, } 285905 &= 2 \times 100000 + 8 \times 10000 + 5 \times 1000 + 9 \times 100 + 5 \times 1 \\ &= 200000 + 80000 + 5000 + 900 + 5.\end{aligned}$$

Qno.2:- write the following in standard form.

a, $7 \times 100000 + 8 \times 10000 + 2 \times 1000 + 9 \times 100 + 6 \times 10 + 5 \times 1$

$$\begin{aligned}\text{sol, } 700000 + 80000 + 2000 + 900 + 60 + 5 \\ &= 782965\end{aligned}$$

b, $4 \times 100000 + 2 \times 10000 + 9 \times 100 + 8 \times 10 + 3 \times 1$.

$$\begin{aligned}\text{sol, } 400000 + 20000 + 900 + 80 + 3 \\ &= 420983.\end{aligned}$$

c, $6 \times 100000 + 8 \times 10000 + 4 \times 100 + 9 \times 10$.

(P.T.O)

Sol, $600000 + 80000 + 400 + 90$
 $= 680490$.

Exercise 1.3

Topic:- Ascending and descending order.

Qno.1:- Mark the periods and compare using $<$, $>$, or $=$ signs in the blanks.

a, $96321 > 75632$

b, $85,632 < 856,320$

c, $19,92,364 < 19,93,695$

Qno.2:- Write the following numbers in descending order.

a, $20,549; 19,680; 54,187; 65,781$.

Sol, $65,781; 54,187; 20,549; 19,680$.

b, $3,96,452; 2,09,586; 8,17,492; 6,18,045$.

Sol, $8,17,492; 6,18,045; 3,96,452; 2,09,586$.

Qno.3:- Write the following numbers in ascending order.

a, $23,658; 78,965; 63,254; 78,966$.

Sol, $23,658; 63,254; 78,965; 78,966$.

b, $2,36,589; 5,69,874; 7,41,230; 4,41,296$.

Sol, $2,36,589; 4,41,296; 5,69,874; 7,41,230$.

Exercise 1.4

Topic:- Forming Numbers

Qno.1:- Make the greatest and smallest numbers with the given digits.

a, $8, 6, 7, 3, 4, 1$.

Sol, The greatest number $= 8,76,431$.

(P.T.O.)

The smallest number = 1,34,678.

ii) 7, 1, 0, 3, 8, 9.

sol, The greatest number = 9,87,310.

The smallest number = 1,03,789.

iii) 4, 5, 8, 0, 1.

sol, The greatest number = 85,410.

The smallest number = 10,458.

b, i, 4, 0, 8, 9, 1, 2, 3.

sol, The greatest number = 98,43,210.

The smallest number = 10,23,489.

ii) 4, 6, 8, 9, 0, 1.

sol, The greatest number = 9,86,410.

The smallest number = 1,04,689.

iii) 5, 6, 4, 7, 8, 9, 3.

The greatest number = 98,76,543.

The smallest number = 34,56,789.

Q no. 2:- Make the greatest and smallest 6-digit numbers by repeating any 3 digits.

a, 7, 9, 5, 4.

sol, The greatest number of 6-digits = 9,99,754.

The smallest number of 6-digits = 4,44,579.

b, 3, 8, 0, 4.

sol, The greatest number of 6-digits = 8,88,430.

The smallest number of 6-digits = 3,00,048.

c, 6, 2, 9, 0

sol, The greatest number = 9,99,620.

The smallest number = 2,00,069.

Qno.3:- A publisher published 456987 books in the year 2001, 374569 books in 2002 and 963258 books in 2003. Compare and write the highest and least number of published books in the given years.

Sol, 9,63,258 books is the greatest number of published books in 2003, 3,74,569 books is the smallest number of published books in 2002.

Qno.4:- Choose any 3 digits and make —
a, a 4-digit number.

Sol, 3-digits are 2, 4, 3.

A 4-digit number = 4432.

b, a 5-digit number.

Sol, A 5-digit number = 44432.

c, a 7-digit number.

Sol, A 7-digit number = 2223334.

Qno.5:- Change the position of the digits, if necessary, to get the greatest 5-digit number.

a, 56328

Sol, The greatest 5-digit number = 86532.

b, 17802.

Sol, The greatest 5-digit number = 87210.

c, 74903.

Sol, The greatest 5-digit number = 97430.

Qno.6:- Write the predecessor and successor of the following numbers.

(P.T.O.)

	Predecessor	Number	Successor
a,	8,56,208	856,209	8,56,210
b,	1,05,653	1,05,654	1,05,655
c,	6,53,246	6,53,247	6,53,248

Qno.7:- Write the predecessor of the smallest 6-digit number.

Sol, The smallest 6-digit number = 100,000.

Its predecessor is 99,999

b, Write the successor of the greatest 5-digit number.

Sol, The greatest 5-digit number = 99,999.

Its successor is 1,00,000.

Exercise 1.5

Topic:- Indian and International systems of Numeration.

Qno.1:- Rewrite the numbers in the Indian place value chart and also in words.

a, 325047

Sol, 3,25,047.

Three lakh twenty five thousand and forty seven.

b, 447896

Sol, 4,47,896.

Four lakh forty seven thousand eight hundred and ninety six.

c, 7,52,368.

Sol, Seven lakh fifty two thousand Three

hundred and sixty eight.

d, 14,78,965

sol, Fourteen lakh seventy eight thousand nine hundred and sixty five.

Qno.2:- Rewrite the numbers in the International place value chart and also in words.

a, 652104.

sol, 652,104

Six hundred fifty two thousand one hundred and four.

b, 412589

sol, 412,589.

Four hundred twelve thousand five hundred and eighty nine.

c, 602583.

sol, 602,583.

Six hundred two thousand five hundred and eighty three.

d, 963258.

sol, 963,258.

Nine hundred sixty three thousand two hundred and fifty eight.

Qno.3:- Draw the Indian and International place value charts and write each of the following numbers in both the charts.

a, 684012 b, 2184589 c, 5307634 d, 7184965.

(P.T.O.)

Indian place value chart						
Lakhs		Thousands		Ones		
TL	L	TH	Th	H	T	O
	6	8	4	0	1	2
2	1	8	4	5	8	9
5	3	0	7	6	3	4
7	1	8	4	9	6	5

International place value chart								
Millions			Thousands			Ones		
HM	TM	M	HTH	TTh	Th	H	T	O
			6	8	4	0	1	2
		2	1	8	4	5	8	9
		5	3	0	7	6	3	4
		7	1	8	4	9	6	5

Qno.4:- Using the international place value chart, write the numeral for each of the following names, separating the periods with commas.

a, Two hundred four thousand six hundred and one.
sol, 204,601.

b, One million two hundred four thousand one hundred and one.

sol, 1,204,101.

c, Seven million four hundred and seven.

sol, 7,000,407.

Exercise 1.6

Topic:- Rounding off Numbers.

Qno.1:- Round the given numbers to the nearest 10.

a, 63 b, 7,552 c, 9,523

sol, 60 sol, b, 7,550 sol, c, 9,520.

Qno.2:- Round the given numbers to the nearest 100.

a, 32,589 b, 63,214 c, 4,78,965.

sol, a, 32,600 sol, b, 63,200 sol, c, 4,79,000.

Qno.3:- Round the given numbers to the nearest 1,000.

(P.T.O.)

a, 63,254

b, 9,65,023

c, 7,41,236.

sol. a, 63,000

sol. b, 9,65,000

sol. c, 7,41,000.

Qno. 4:- Some numbers cannot be rounded off as in numbers with facts and time. Write Yes or No.

a, The human body has 206 bones.

Can it be rounded off to the nearest 100? NO.

b, School begins at 8 a.m.

Can it be rounded off to the nearest 10? NO.

c, 25 children were sent to the circus.

Can it be rounded off to the nearest 10? NO.

Exercise 1.7

Topic:-

Roman Numerals

Qno. 1:- Write the Roman numerals for each of the given numbers.

a, 36

XXXVI

b, 45

XLV

c, 359

CCCLIX

d, 198

CXC VIII

e, 88

LXXXVIII

f, 112

CXII

Qno. 2:- Write the Hindu-Arabic numbers for each of the given numerals.

a, XIX

19

b, XLIV

44

c, XCV

95

d, CMXXXVIII

938

(P.T.O.)

e, LVII	57
f, CDV	405
g, CMXVI	916

Q no. 3:- Find the sum of the following and write answers in Roman numerals.

a, $XXX + XXIV = \underline{LIV}$

b, $XIX + L = \underline{LXIX}$

c, $XII + VII + XXII = \underline{XLI}$

d, $XXXIV + L = \underline{LXXXIV}$

Q no. 4:- Find The difference. Then write The answers in Roman numerals.

a, $40 - 20 = \underline{XL - XX = XX}$

b, $50 - 21 = \underline{L - XXI = XXIX}$

c, $50 - 19 = \underline{L - XIX = XXXI}$

d, $60 - 40 = \underline{LX - XL = XX}$

Q no. 5:- Fill in The blanks with Roman numerals.

a, November has XXX days.

b, February has XXVIII or XXIX days.

c, A person has XXXII Teeth.

d, A year has LII weeks.

Chapter 2. Exercise 2.1

Topic:- Addition

Q no. 1:- Add the following.

a, TTh Th HTO

7 1 5 6 9

b, TTh Th HTO

6 8 0 6 0

$$+ \begin{array}{r} 26420 \\ 97989 \\ \hline \end{array}$$

$$+ \begin{array}{r} 31529 \\ 99589 \\ \hline \end{array}$$

C, TTh Th HTO

$$42367$$

$$+ 53612$$

$$\underline{95979}$$

Qno.2:- Find the sum.

a, TTh Th HTO

$$35685$$

$$+ 41475$$

$$\underline{77160}$$

b, TTh Th HTO

$$63439$$

$$+ 23842$$

$$\underline{87281}$$

C, TTh Th HTO

$$46316$$

$$+ 31795$$

$$\underline{78111}$$

Qno.3:- Add the following.

a, LTTh Th HTO

$$424217$$

$$139215$$

$$+ 40258$$

$$\underline{603690}$$

b, LTTh Th HTO

$$329818$$

$$285300$$

$$+ 106946$$

$$\underline{722064}$$

C, LTTh Th HTO

$$256427$$

$$109285$$

$$+ 45300$$

$$\underline{411012}$$

Qno.4:- Arrange in columns and add the following.

a, 56,789 + 14,789

C, 2,58,741 + 36,957.

Sol, a, 56,789

Sol, C, 2,58,741

$$+ 14,789$$

$$+ 36,957$$

$$\underline{71,578}$$

$$\underline{2,95,698}$$

e, 7,45,632 + 42,365 + 21,403.

Sol, 7,45,632

$$+ 42,365$$

$$+ 21,403$$

$$\underline{8,09,400}$$

Qno.5:- Find the sum of the largest 6-digit number and the smallest 5-digit number.

sol, The largest 6-digit number = 9,99,999.

The smallest 5-digit number = 10,000.

$\therefore$ Their sum = 9,99,999

+ 10,000

10,09,999

Qno.6:- Add 33 thousands, 22 hundreds, and 47 tens by suitable regrouping.

sol, 33 thousands = 3 ten thousands and 3 thousands.

22 hundreds = 2 thousands and 2 hundreds.

47 tens = 4 hundreds and 7 tens

33,000

+ 2,200

+ 470

35,670

Qno.7:- Add The following numbers.

a, Five lakh thirty six thousand nine hundred and eighty four; and thirty two thousand four hundred and fifteen.

sol, 5,36,984

+ 32,415

5,69,399

b, Ninety four thousand and forty-seven; two lakh thirty seven hundred and eight; and sixty-nine thousand five hundred and thirteen.

(P.T.O.)

$$\begin{array}{r}
 \text{Sol, } 94,047 \\
 + 2,03,708 \\
 + \underline{69,513} \\
 \hline
 3,67,268
 \end{array}$$

Exercise 2.2

Topic:- Rules of Addition

Qno.1:- Add the following numbers and compare the sum.

$$a, 3,24,569 + 47,856 = 47,856 + 3,24,569.$$

$$\begin{array}{r}
 \text{Sol, } 3,24,569 \\
 + \underline{47,856} \\
 \hline
 3,72,425
 \end{array}$$

$$\begin{array}{r}
 47,856 \\
 + \underline{3,24,569} \\
 \hline
 3,72,425
 \end{array}$$

$$b, 6,32,140 + 1,21,365 = 1,21,365 + 6,32,140$$

$$\begin{array}{r}
 \text{Sol, } 6,32,140 \\
 + \underline{1,21,365} \\
 \hline
 7,53,505
 \end{array}$$

$$\begin{array}{r}
 1,21,365 \\
 + \underline{6,32,140} \\
 \hline
 7,53,505
 \end{array}$$

$$c, 3,25,416 + 2,47,856 = 2,47,856 + 3,25,416$$

$$\begin{array}{r}
 \text{Sol, } 3,25,416 \\
 + \underline{2,47,856} \\
 \hline
 5,73,272
 \end{array}$$

$$\begin{array}{r}
 2,47,856 \\
 + \underline{3,25,416} \\
 \hline
 5,73,272
 \end{array}$$

Qno.2:- Add and observe the answers

$$a, i, 31,244 + 23,419 + 41,695 \quad (ii) \quad 31,244 + 41,695 + 23,419$$

$$\begin{array}{r}
 \text{Sol, } 31,244 \\
 + 23,419 \\
 + \underline{41,695} \\
 \hline
 96,358
 \end{array}$$

$$\begin{array}{r}
 \text{Sol, } 31,244 \\
 + 41,695 \\
 + \underline{23,419} \\
 \hline
 96,358
 \end{array}$$

$$\text{Qiv } 23,419 + 41,695 + 31,244.$$

$$\begin{array}{r} \text{sol, } 23,419 \\ + 41,695 \\ + 31,244 \\ \hline 96,358 \end{array}$$

$$\text{(iv) } 41,695 + 31,244 + 23,419.$$

$$\begin{array}{r} \text{sol, } 41,695 \\ + 31,244 \\ + 23,419 \\ \hline 96,358 \end{array}$$

a(ii) = (ii) = (iii) = (iv) = 96,358, answer is same for all.

$$\text{b, ii, } 53,206 + 24,714 + 6,692.$$

$$\begin{array}{r} \text{sol, } 53,206 \\ + 24,714 \\ + 6,692 \\ \hline 84,612 \end{array}$$

$$\text{ii, } 53,206 + 6,692 + 24,714.$$

$$\begin{array}{r} \text{sol, } 53,206 \\ + 6,692 \\ + 24,714 \\ \hline 84,612 \end{array}$$

$$\text{Qii, } 24,714 + 53,206 + 6,692$$

$$\begin{array}{r} \text{sol, } 24,714 \\ + 53,206 \\ + 6,692 \\ \hline 84,612 \end{array}$$

$$\text{(iv) } 6,692 + 53,206 + 24,714.$$

$$\begin{array}{r} \text{sol, } 6,692 \\ + 53,206 \\ + 24,714 \\ \hline 84,612 \end{array}$$

b, (i) = (ii) = (iii) = (iv) = 84,612, answer is same for all.

Qno.3:- Fill in the blanks.

$$\text{a, } 27,165 + 0 + 8,369 = 8,369 + \underline{0} + 27,165.$$

$$\text{b, } (3,381 + 76,863) + 4,123 = (76,863 + 4,123) + \underline{3,381}.$$

$$\text{c, } 34,065 + (17,231 + 5,443) = 5,443 + (\underline{17,231} + 34,065).$$

$$\text{d, } 28,163 + (3,715 + 42,010) = 42,010 + (\underline{3,715} + 28,163).$$

$$\text{e, } 52,343 + (35,363 + 68,313) = \underline{68,313} + (52,343 + 35,363).$$

Qno.4:- Add The following.

$$\text{a, } 25,631 + 1 = \underline{25,632}.$$

$$\text{b, } 58,963 + 10 = \underline{58,973}.$$

$$\text{c, } 74,569 + 100 = \underline{74,669}.$$

$$\text{d, } 4,45,632 + 100 = \underline{4,45,732}.$$

$$\text{e, } 8,56,324 + 1 = \underline{8,56,325}.$$

$$\text{f, } 64,123 + 1,000 = \underline{65,123}.$$

$$9,963,258 + 1000 = \underline{9,964,258} \quad \text{h, } 9,96,324 + 0 = \underline{9,96,324}$$

Exercise 2.3

Topic:- Word Problems.

Qno.1:- Solve The following.

a, In an entrance examination, 4,159 girls and 3,298 boys appeared. How many students did appear for the examination.

Sol, Number of girls appeared = 4,159.

Number of boys appeared = 3,298.

∴ Total number of students appeared for the examination =

$$\begin{array}{r} 4,159 \\ + 3,298 \\ \hline 7,457 \end{array}$$

b, In a school there are 1,024 students in grades 1 and 2 and 1,990 students in grades 3 and 4; Find the Total number of students in The school.

Sol, Number of students in grades 1 and 2 = 1,024.

Number of students in grades 3 and 4 = 1,990.

∴ Total number of students in The school =

$$\begin{array}{r} 1,024 \\ + 1,990 \\ \hline 3,014 \end{array}$$

c, In an exhibition, 28,610 people visited on day One, 27,746 on day Two, 6,809 on day 3, and 11,367 on day 4. Find the Total number of people visited the exhibition.

Sol, Number of people visited an exhibition on Ist

(P.T.O.)

$$\text{day} = 28,610.$$

$$\text{Number of people visited on 2nd day} = 27,746.$$

$$\text{Number of people visited on 3rd day} = 6,809.$$

$$\text{Number of people visited on 4th day} = 11,367.$$

$$\therefore \text{Total number of people visited the exhibition} =$$

$$\begin{array}{r} 28,610 \\ + 27,746 \\ + 6,809 \\ + 11,367 \\ \hline 74,532 \end{array}$$

d, A garment factory manufactured 35,390 garments in January, 71,715 garments in February and 90,874 garments in March. How many garments were manufactured by the factory.

$$\text{sol, Garments manufactured in January} = 35,390.$$

$$\text{Garments manufactured in February} = 71,715.$$

$$\text{Garments manufactured in March} = 90,874.$$

$$\therefore \text{Total garments manufactured by the factory} =$$

$$\begin{array}{r} 35,390 \\ + 71,715 \\ + 90,874 \\ \hline 197,979 \end{array}$$

Qno.2:- Solve the following problems. Use only the information that is needed.

a, Rita's school has 20,356 students. Saroj's school, which is 112 km away, has 12,145 students. How many students are there in both the schools

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altogether?

Sol, Number of students in Rita's school = 20,356.

Number of students in Saroj's school, which is 112 km away = 12,145.

$$\therefore \text{Total number of students in both the schools} = 20,356 + 12,145 = 32,501$$

b, Raja took part in a car rally along with 727 other people. On the first day, he covered 485 km, the second day 398 km and the third day 502 km. How much distance did he cover in all?

Sol, In a car rally, Raja covered distance on the first day = 485 km.

Distance covered by Raja on 2nd day = 398 km.

Distance covered by Raja on 3rd day = 502 km.

$$\therefore \text{Total distance covered by Raja in all} = 485 \text{ km} + 398 \text{ km} + 502 \text{ km} = 1,385 \text{ km}$$

c, There were 32,641 men watching a hockey match in a stadium. The capacity of the stadium is 80,000 people. There were also 21,645 women watching the match. How many people in all were there to watch the match?

Sol, Capacity of a stadium = 80,000

Number of men watching a hockey match = 32,641

Number of women watching a hockey match = 21,645

∴ Total number of people in all = 32,641

+ 21,645

54,286

Mathematics 'B'

Topic:- Geometry

Definitions:-

Point:- A point is the smallest shape in geometry. It is represented on paper by a dot. It has neither length nor breadth.

It is named by a capital letter of the English alphabet. A

Line:- A line is a collection of points extended endlessly (indefinitely) in both the directions usually along a straight path. A line has no endpoints and it has no fixed length. When the word 'line' is used, it means a straight line.



A line is represented by the arrowheads on both sides to show that it can be extended on both sides. The symbol of a straight line is $\longleftrightarrow$.

Line Segment:-

A line segment is part of a line. It has a definite length and is marked by two endpoints.

A line segment can be measured. A $\overline{RS}$ line segment can be drawn horizontally, vertically, or slanting. $\overline{RS}$ is the symbol for line segment RS.

Ray:-

It starts from an endpoint and can extend in one direction only. It cannot be measured.

The symbol for a ray is $\rightarrow$.

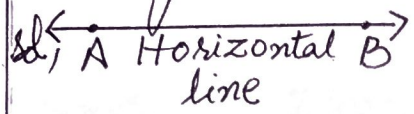


Curved Lines:-

Curved lines are not drawn with the help of a scale.

Exercise 8.1

Qno.1:- Draw and name a horizontal, vertical, and slanting line.



Qno.2:- Draw and name a horizontal, vertical, and slanting line segment.

Sol,



Horizontal line segment



Slanting line segment



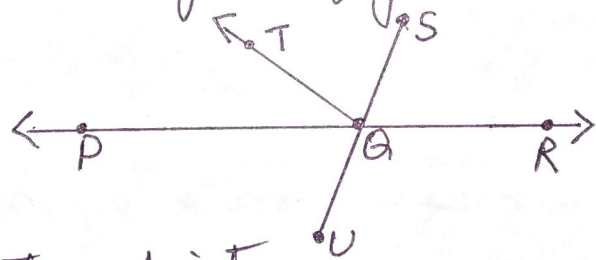
Vertical line segment

Qno.3:- Draw three different rays. Name them.

Sol,



Qno.5:- Observe the given figure and answer the questions.



a, Name all the points.

Sol, P, Q, R, S, T, U.

b, Name any two rays.

Sol, QP, QR.

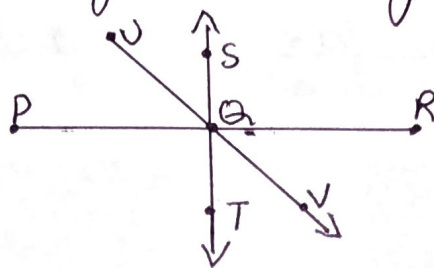
c, Name all line segments.

Sol, PQ, TQ, SQ, QR, QU, PR, SU.

d, Name the line. Sol, PR.

Exercise 8.2Topic:- Measuring Line Segment.

Q no-5:-



a, Name the line that contains the point S.

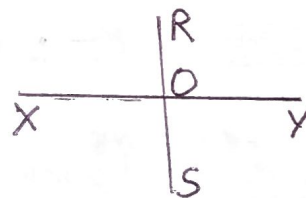
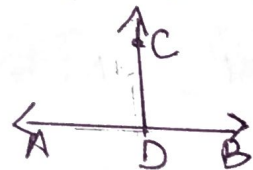
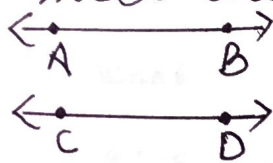
sol, ST.

b, Name all opposite rays.

sol, Ray QS and Ray QT.

c, Name any five points.

sol, P, R, V, T, S.

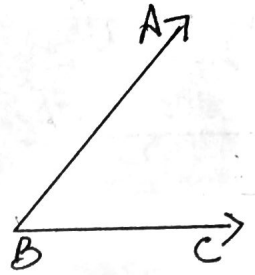
Definitions:-Intersecting Line Segment:- The meeting point of two lines or line segments is called the point of intersection.Perpendicular Lines:- When a vertical ray, line or line segment meets a horizontal ray, line, or line segment, perpendicular lines are formed. E.g; Letters T and LParallel Lines:- Lines which never meet are called parallel lines. They are always at an equal distance from each other.

E.g; The edges of your ruler and rails of a railway track.

(P.T.O.)

Angle :-

When two rays or line segments meet at a point, an angle is formed. The symbol used for angle is $\angle$. This figure shows $\angle ABC$.

Exercise 8.3

Qno. 2:- Write the difference between the following

a, a line and a ray

Sol, A line can be extended on both the sides. A line has no end points and it has no fixed length.

A ray starts from an endpoint and can extend in one direction only. It cannot be measured.

b, A line and a line segment.

Sol, Line is mentioned above.

A line segment is part of a line. It has a definite length and is marked by two endpoints.

c, a ray and a line segment.

Sol, Both are mentioned above.

d, a straight line and curve line.

Sol, A straight line is drawn with the help of a scale.

A curved line is not drawn with the help of a scale.

Qno. 3:- Fill in the blanks.

a, A line can be extended on both sides.

b, A line segment has Two endpoints.

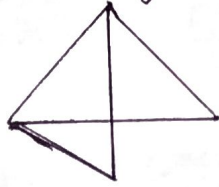
c, A ray has one endpoint.

d, Two straight lines can meet at one point only.

e, When two rays, or line segments meet at a point, they form an angle.

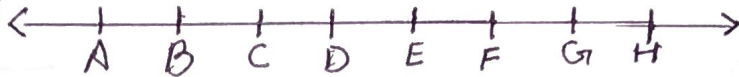
f, Parallel lines are always at an equal distance from each other.

Qno. 4:-



a, The given figure has 9 line segments.

b, which of the following are the longest and second longest line segments?



sol, Longest line segment = AH, Second longest line segment = AG and BH.

Exercise 8.4

Qno. 1:- In the given figure, name the

a, angle

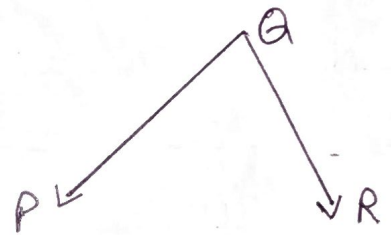
sol, $\angle PQR$.

b, arms of the angle.

sol, PQ and RQ.

c, vertex.

solc, Q.



Qno. 2:- In the given figure, name the

a, vertex sol a, D.

b, points in the interior of the angle ADC

sol, Points in the interior of the $\angle ADC = P, R, S, T$.

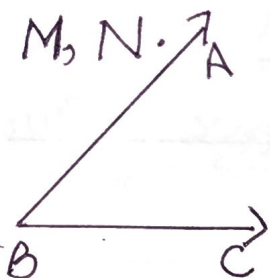
c, points in the exterior of the angle ADC.

sol, Points in the exterior of the $\angle ADC = M, N$.

Qno. 3:- Draw an angle and name it.

Also name its arms and vertex.

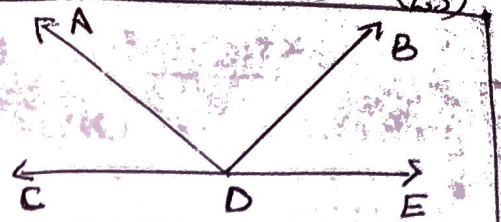
sol, In $\angle ABC$, AB and BC = arms and B is vertex.



(P.T.O.)

Qno. 4:- Name the angles in the following figure.

sol, $\angle ADC$, $\angle ADB$, $\angle BDE$.



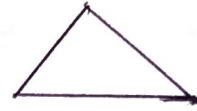
Definitions

Topic:-

Closed and Open figures

Closed figure:-

Figures that start and end at the same place are closed figures.



Open figure:-

Figures that start at one place and end at another place are open figures.



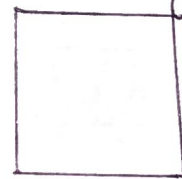
Polygons:-

Polygons are named according to the number of their sides.



Quadrilateral:-

A polygon having four sides is called a quadrilateral. So a square and a rectangle are quadrilateral.



Exercise 8.6

Topic:- Perimeter

Qno. 1:- Find the perimeter of each of the following figures.

sol, a, Perimeter = $8\text{cm} + 4\text{cm} + 8\text{cm} + 4\text{cm} = 24\text{cm}$.

b, Perimeter = $7\text{cm} + 3\text{cm} + 9\text{cm} = 19\text{cm}$.

c, Perimeter = $11\text{cm} + 5\text{cm} + 12\text{cm} + 6\text{cm} = 34\text{cm}$.

(P.T.O)

$$d, \text{ Perimeter} = 10\text{cm} + 6\text{cm} + 2\text{cm} + 4\text{cm} + 5\text{cm} + 4\text{cm} + 3\text{cm} + 6\text{cm} = 40\text{cm}$$

$$e, \text{ Perimeter} = 4\text{cm} + 12\text{cm} + 14\text{cm} + 5\text{cm} + 10\text{cm} = 45\text{cm}$$

$$f, \text{ Perimeter} = 4\text{cm} + 5\text{cm} + 2\text{cm} + 3\text{cm} + 12\text{cm} + 3\text{cm} + 6\text{cm} + 5\text{cm} = 40\text{cm}$$

Qno. 2: - The perimeters of the following figures are written at the centre. Find the missing length in each figure.

$$\text{Sol a, Total perimeter} = 42\text{cm} \quad \text{Sol c, Total perimeter} = 40\text{cm}$$

$$\text{Perimeter} = 16\text{cm} + 5\text{cm} + 16\text{cm} + x \quad \text{Perimeter} = 8\text{cm} + x + 11\text{cm} + 9\text{cm}$$

$$= 37\text{cm} + x = 42\text{cm} \quad = 28\text{cm} + x = 40\text{cm}$$

$$x = 42\text{cm} - 37\text{cm} = 5\text{cm}$$

$$\therefore \text{Missing length} = 5\text{cm}$$

$$= x = 40\text{cm} - 28\text{cm} = 12\text{cm}$$

$$\therefore \text{Missing length} = 12\text{cm}$$

$$b, \text{ Total perimeter} = 36\text{cm} \quad \text{Sol d, Total perimeter} = 34\text{cm}$$

$$\text{Perimeter} = 12\text{cm} + 12\text{cm} + x \quad \text{Perimeter} = 7\text{cm} + 10\text{cm} + x + 10\text{cm}$$

$$= 24\text{cm} + x = 36\text{cm} \quad = 27\text{cm} + x = 34\text{cm}$$

$$= x = 36\text{cm} - 24\text{cm} = 12\text{cm}$$

$$= x = 34\text{cm} - 27\text{cm} = 7\text{cm}$$

$$\therefore \text{Missing length} = 12\text{cm}$$

$$\therefore \text{Missing length} = 7\text{cm}$$

Qno. 3: - Look at the figures drawn on the square-lined sheet given below. Each square on the sheet has a side of 1 cm. Find the perimeters of the figures drawn.

$$\text{Sol a, Perimeter} = 1\text{cm} + 2\text{cm} + 3\text{cm} + 1\text{cm} + 2\text{cm} + 1\text{cm} = 10\text{cm}$$

$$b, \text{ Perimeter} = 3\text{cm} + 2\text{cm} + 4\text{cm} + 1\text{cm} + 1\text{cm} + 1\text{cm} = 12\text{cm}$$

$$c, \text{ Perimeter} = 1\text{cm} + 2\text{cm} + 3\text{cm} + 2\text{cm} + 1\text{cm} + 1\text{cm} + 1\text{cm} + 1\text{cm} = 12\text{cm}$$

$$d, \text{ Perimeter} = 3\text{cm} + 3\text{cm} + 4\text{cm} + 2\text{cm} + 1\text{cm} + 1\text{cm} = 14\text{cm}$$

$$e, \text{ Perimeter} = 2\text{cm} + 5\text{cm} + 3\text{cm} + 1\text{cm} + 1\text{cm} + 2\text{cm} + 1\text{cm} + 1\text{cm} + 1\text{cm} + 1\text{cm} = 18\text{cm}$$

$$f, \text{ Perimeter} = 3\text{cm} + 1\text{cm} + 1\text{cm} + 2\text{cm} + 1\text{cm} + 1\text{cm} + 1\text{cm} + 1\text{cm} +$$

$$1\text{cm} + 1\text{cm} + 1\text{cm} + 1\text{cm} + 1\text{cm} + 2\text{cm} + 1\text{cm} + 1\text{cm} = 20\text{cm}.$$

Qno. 4: - Find the perimeter of a square having each side as given below.

a, 5cm.

b, 8cm.

Sol, Side of a square = 5cm.

Sol, Side of a square = 8cm

Perimeter of a square = $4 \times \text{side}$.

Perimeter of a square = $4 \times \text{side}$

$$\therefore \text{Perimeter} = 4 \times 5\text{cm} = 20\text{cm}.$$

$$\therefore \text{Perimeter} = 4 \times 8\text{cm} = 32\text{cm}$$

c, 11cm.

d, 13cm.

Sol, Side of a square = 11cm.

Sol, Side of a square = 13cm.

Perimeter of a square = $4 \times \text{side}$

Perimeter of a square = $4 \times \text{side}$

$$\therefore \text{Perimeter} = 4 \times 11\text{cm} = 44\text{cm}.$$

$$\therefore \text{Perimeter} = 4 \times 13\text{cm} = 52\text{cm}.$$

Qno. 5: - Which figure has the greater perimeter - (a) or (b)?

Sol a, Perimeter = $8\text{cm} + 5\text{cm} +$

Sol b, Perimeter = $4\text{cm} + 6\text{cm}$

$$6\text{cm} + 2\text{cm} + 3\text{cm} + 7\text{cm} = 31\text{cm}$$

$$+ 2\text{cm} + 3\text{cm} + 4\text{cm} + 3\text{cm} +$$

$$8\text{cm} = 30\text{cm}.$$

$\therefore$ Figure (a) has the greater perimeter than figure (b)