

**INTERNATIONAL INDIAN SCHOOL, DAMMAM**  
**MIDDLE SECTIONS (BMS/GMS)**  
**CLASS -VI MATHEMATICS WORKSHEET TERM-2 (2023 -24)**

**L-5 UNDERSTANDING ELEMENTARY SHAPES**

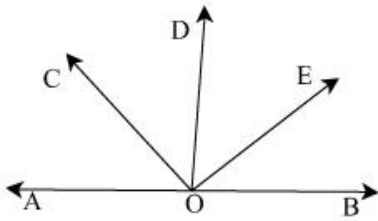
**I. FILL IN THE BLANKS:**

1. The turn from north to south is by two right angles, it is called a \_\_\_\_\_.  
(a) right angle      (b) straight angle      (c) reflex angle      (d) none
2. The measure of straight angle is \_\_\_\_\_.  
(a)  $90^\circ$       (b)  $270^\circ$       (c)  $180^\circ$       (d)  $360^\circ$
3. A triangle having two equal sides is called an \_\_\_\_\_.  
(a) equilateral triangle      (b) isosceles triangle      (c) scalene triangle      (d) none
4. Name the triangle:  $\triangle ABC$  such that  $AB=9$ ,  $BC=6.5$ ,  $AC=8$ .  
(a) equilateral triangle      (b) isosceles triangle      (c) scalene triangle      (d) none
5. In a ..... there is only one pair of parallel sides.  
(a) rhombus      (b) parallelogram      (c) square      (d) trapezium
6. Number of right angles turned by the hour hand of a clock when it goes from 3 to 6.  
(a) 1      (b) 2      (c) 3      (d) 4
7. The measure of a complete angle is  
(a)  $90^\circ$       (b)  $180^\circ$       (c)  $360^\circ$       (d) none of these
8. Each angle of a rectangle is a ..... angle.  
(a) right angle      (b) straight angle      (c) reflex angle      (d) none
9. .... sides of a rhombus are of equal length.  
(a) 1      (b) 2      (c) 3      (d) 4
10. A rhombus with four right angles is called a .....  
(a) rectangle      (b) parallelogram      (c) square      (d) trapezium
11. Which direction will you face if you start facing, east and make  $1/2$  of a revolution anti-clockwise?  
(a) west      (b) east      (c) north      (d) south
12. Where will the hand of a clock stop if it starts at 1 and makes  $1/2$  of a revolution clockwise?  
(a) 1      (b) 7      (c) 9      (d) 4

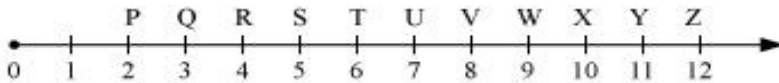
13. What part of a revolution have you turned through if you stand facing:  
 (a) east and turn clockwise to face north?  
 (b) south and turn clockwise to face east?  
 (c) west and turn clockwise to face east?

14. In a  $\triangle ABC$   $AB=12$  cm ,  $BC=13$  cm ,  $AC=5$  cm and  $\angle C=90^\circ$ . Classify the triangle according to sides and angle.

15. In the given figure  $\angle BOE$  represents  
 (a) An acute angle (b) a right angle  
 (c) an obtuse angle (d) a straight angle



16. Which of the following statements is incorrect with respect to the given figure?



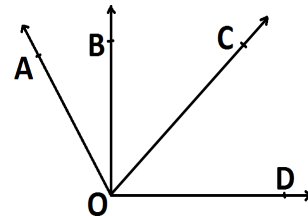
- (a)  $PT=WZ$  (b)  $QS=UW=XZ$   
 (c) T is the mid-point of QW (d) X is the mid-point of WZ

17. How many right angles do you make if you start facing:

- (a) south and turn clockwise to west?  
 (b) north and turn anti-clockwise to east?

18. In figure, which of the following statements are true:

- (i) Point B is the interior of  $\angle AOB$ .  
 (ii) Point B is the interior of  $\angle AOC$ .  
 (iii) Point A is the interior of  $\angle AOD$ .  
 (iv) Point C is the exterior of  $\angle AOB$ .  
 (v) Point D is the exterior of  $\angle AOC$ .



19. Match the following given below

<u>Column A</u>	<u>Column B</u>
a) All the three sides of a triangle are of unequal length	(i) Rectangle
b) Parallelogram with all angles $90^\circ$ is	(ii) Equilateral Triangle
c) All the three sides of a triangle are equal.	(iii) Parallelogram
d) A quadrilateral having two pairs of parallel sides.	(iv) Scalene Triangle

20. Which direction will you face if you start facing

- a) east and make  $\frac{3}{4}$  of a revolution clockwise?
- b) north and make one full revolution?
- c) west and make  $\frac{1}{2}$  of a revolution anti-clockwise?

21. a) If a clock hand starts from '12' and stops at 9. How many right angles has it moved?

b) Where will the hand of a clock stop if starts at 3 and makes  $\frac{3}{4}$  of revolution clockwise.

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## **L- 6 INTEGERS**

### **CHOOSE THE CORRECT OPTION:**

- 1) The successor of -9 is \_\_\_\_\_.  
a) 10      b) -10      c) -8      d) 9
- 2) The greatest negative integer is \_\_\_\_\_.  
a) 0      b) -1      c) -10      d) -100
- 3)  $(-9) + 15 =$  \_\_\_\_\_.  
a) 24      b) 6      c) -6      d) -24
- 4) The integer which is 5 less than (-9) is \_\_\_\_\_.  
a) 0      b) -4      c) -14      d) 4
- 5)  $(-6) + \underline{\quad} = (-15)$   
a) -9      b) 9      c) -21      d) 11

6) Withdrawal of Rs.450 . Represent it as an integer.

- a) +450      b) -450      c) 0      d) none of these

7)  $(-46) + 18$  \_\_\_\_\_  $(-39) - (-5)$

- a) =      b) <      c) >      d) None of these

8) The ascending order of the following integers -3, 5,-9,-2, 8 are \_\_\_\_\_.

- a) -2,-3, 5, 8,-9      b) -9, 8, 5,-3,-2      c) -9,-3,-2, 5, 8      d) 5, 8,-2,-3,-9

9) The greatest integer lying between -10 and -15 is \_\_\_\_\_

- a)-11      b)-12      c)-13      d)-14

10)  $(-20) + (-10) - 7 - (-9) =$  \_\_\_\_\_

- a)-32      b) 32      c)-28      d)-46

### **ASSERTION REASON QUESTIONS**

11) **Assertion:** - Sum of -20 and -5 is 25

**Reason:** - When two negative integers are added we get a negative integer.

- a) Both A and R are true and R is the correct explanation of A  
b) Both A and R are true but R is not the correct explanation of A  
c) A is true but R is false  
d) A is false but R is true

12) **Assertion:** - The additive inverse of (+10) is (-10)

**Reason:**  $(+10) + (-10) = 0$

- a) Both A and R are true and R is the correct explanation of A  
b) Both A and R are true but R is not the correct explanation of A  
c) A is true but R is false  
d) A is false but R is true

### **CASE BASED STUDY:-**

13) A child was given 5 quiz tests and the scores of his were recorded as follows: -3, +7, 0, -2, 6

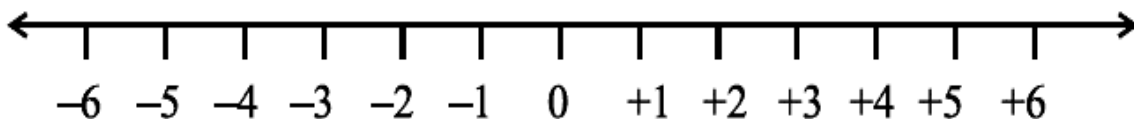
- (i) What is the lowest score the child got?
- (ii) What is the difference between the highest and the lowest score?
- (iii) Which integer lies to the extreme left on the number line?
- (iv) Find the sum of -3, +7, 0, -2, 6.

14) On a certain day, the temperatures recorded in a few cities are given in the table.

Place	Temperature
Hyderabad	35°C
Ooty	17°C
Kashmir	-2°C
Darjeeling	-5°C
Moscow	-4°C

- (i) Which is the coldest city?
- (ii) Find the difference in temperatures between Ooty and Moscow?
- (iii) Write the correct order of cities in the increasing order of their temperatures?
- (iv) The temperature at Moscow decreased by 12°C. Find the final temperature at Moscow.

15) By observing the number line below, answer the following questions:



- (i) 6 and \_\_\_\_\_ are at the same distance from 0 on the number line.
- a) 0                      b)5                      c)-5                      d)-6

(ii) On the number line, the integer +5 is located

- (a) to the left of 0    (b) to the right of 0    (c) to the left of 1    (d) to the left of -2

(iii) In which of the following pairs of integers, the first integer is not on the left of the other integer on the number line?

- (a) (-1, 4) (b) (-3, -5) (c) (-5, -3) (d) (-6, 0)

(iv) Number of integers lying between -1 and 1 is

- (a) 1 (b) 2 (c) 3 (d) 0

(v) Which number will we reach if we move 5 numbers to the right of -3.

16. Write the following numbers with appropriate sign:

- (a) 230 m below the sea level  
(b) 15 C above 0 C temperature  
(c) Profit of Rs.100  
(d) Withdrawal of Rs 250

17. Draw a number line and answer the following

- (a) Which number will we reach if we move 6 numbers to the right of -2  
(b) If we are at -5 on the number line, in which direction do we move to reach -1?

18. Using the number line write the integers which is

- (a) 5 less than 3    (b) 5 more than -5

19. Use number line and add the following integers

- (a)  $8 + (-3)$     (b)  $(-2) + (-3) + (-4)$     (c)  $(-2) + (-5)$

20. Add without using number line

- (a)  $10 + (-4)$     (b)  $(-13) + (-18)$     (c)  $(-250) + (+140)$

21. Solve (a)  $75 - (30)$  (b)  $54 - 80$  (c)  $(-35) - (-65)$

22. Fill in the blanks with  $<$  = or  $>$  sign

- (a)  $(-5) + (-6)$  .....  $(-5) - (-6)$   
(b)  $(-35) - (-10)$  .....  $(-30) + 5$   
(c)  $65 - (-11)$  .....  $77 + (-4)$   
(d)  $45 + (-21)$  .....  $(-45) - (-21)$   
(e)  $100 - (-20)$  .....  $100 + 20$

23. Fill in the blanks

- (a)  $(-10) + \dots = 0$
- (b)  $25 + \dots = 0$
- (c)  $35 + (-35) = \dots$
- (d)  $\dots - 15 = -10$
- (e)  $(-4) + \dots = (-15)$

24. Find

- (a)  $(-7) - 10 - (-20)$
- (b)  $(-10) + 45 - 5 - 3$
- (c)  $100 - (-250) + 10 - (-20)$

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### L-8 DECIMALS

l) Choose the correct option

1) Express the 2 mm as cm using decimals.

- a) 0.2
- b) 0.02
- c) 2.0
- d) 2.00

2) 10 paise =

- a) 0.1 rupee
- b) 0.01 rupee
- c) 0.001 rupee
- d) 0.0001 rupee

3) 8cm =

- a) 0.8 m
- b) 0.08 m
- c) 0.008 m
- d) 0.0008 m.

4) 5m =

- a) 0.5 km
- b) 0.05 km
- c) 0.005 km
- d) 0.0005 km.

5) 5g =

- a) 0.005 kg
- b) 0.05 kg
- c) 0.5 kg
- d) none of these.

6) 2 L =

- a) 200 ml
- b) 2000 ml
- c) 20 ml
- d) 2 ml

7) 17 kg 84g =

- a) 17840 g      b) 1784 g      c) 17008 g      d) 17084 g

8) 60 km 5 m =

- a) 600.05 km      b) 60.005 km      c) 6000.5 km      d) 6.0005 km

9) 0.29 + 0.36 =

- a) 0.065      b) 0.65      c) 65      d) none of this.

10) 8 - 0.99 =

- a) 7.01      b) 7.001      c) 0.71      d) 7.001

## II) Assertion (A) & Reason(R) Questions

11) **Assertion (A)** : 0.7, 0.70, 0.700 are equivalent decimals.

**Reason(R)**: Number of zero at the end of decimal number change the value of the number.

- a) Both Assertion (A) and Reason(R) are true and Reason(R) is the correct explanation of Assertion (A)  
b) Both Assertion (A) and Reason(R) are true but Reason(R) is not the correct explanation of Assertion (A).  
c) Assertion (A) is true but Reason(R) is false.  
d) Assertion (A) is false but Reason(R) is true.

12) **Assertion (A)** : The fraction form of 16.25 is  $\frac{1625}{100}$

**Reason(R)**: In the denominator, write 1 followed by as many zeroes as there are decimal place in the given decimal.

- a) Both Assertion (A) and Reason(R) are true and Reason(R) is the correct explanation of Assertion (A)  
b) Both Assertion (A) and Reason(R) are true but Reason(R) is not the correct explanation of Assertion (A).  
c) Assertion (A) is true but Reason(R) is false.  
d) Assertion (A) is false but Reason(R) is true.

13) **Assertion (A)** : Expressing 735 m into km, we get 735000km.

**Reason:**  $1\text{m} = \frac{1}{1000}\text{km}$

- a) Both Assertion (A) and Reason(R) are true and Reason(R) is the correct explanation of Assertion (A)  
b) Both Assertion (A) and Reason(R) are true but Reason(R) is not the correct explanation of Assertion (A).



- c) Assertion (A) is true but Reason(R)is false.
- d) Assertion (A) is false but Reason(R)is true.

**14) Case study-based question.**

i) Ten years old Rahul can carry a maximum weight of 15 kg. If he bought 4 kg 900 g of apples, 2 kg 600 g of grapes and 5 kg 300 g of mangoes. Can he carry the total weight that he bought. If yes, then how much more weight he can carry with him?

ii) Mr. Rajan purchased 15.500 kg rice, 25.750 kg flour and 3.250 kg sugar. Find the total weight of his purchases. Is it 50 kg or less? If less,how much less?

15) Which is greater?

- (a) 0.15 or 0.2    (b) 0.85 or 0.9    (c) 0.33 or 0.34    (d) 1.591 or 1.590

16) Express as rupees using decimals.

- (a) 7 paise    (b) 82 paise    (c) 27 rupees 3 paise  
(d) 95 rupees 65 paise    (e) 654 paise

17) Express as metres using decimals.

- (a) 28 cm    (b) 8 m 5 cm    (c) 2 cm    (d) 7m 37 cm    (e)528 cm

18) Express as cm using decimals.

- (a) 9 mm    (b) 43 mm    (c) 5 cm 4 mm    (d) 182 mm

19) Express as km using decimals

- (a) 9 m    (b) 99 m    (c) 999m    (d) 9999m    (e) 45 km 6 m  
(f) 37 km 62 m    (g) 78 km 678 m

20) Express as kg using decimals.

- (a) 6 g    (b) 11g    (c)768g    (d) 7 kg 38 g    (e) 36 kg 765 g

(21) Sarah bought 5 m 10 cm of cloth for her curtains and 3 m 75 cm of cloth for her tablecloth. Determine the total length of cloth bought by her.

(22) In the morning, Meenu traveled 15 km 73 m in a car, and in the evening, she traveled 10 km568m in a bus. What is the total distance she traveled?

(23) Rahul bought fruits weighing 8 kg. Out of this, 2 kg 500 g is apples, 1 kg 75 g is bananas, and the rest is oranges. What is the weight of the oranges?

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## L-9 DATA HANDLING

### I. CHOOSE THE CORRECT OPTION:

1. Using tally marks, which one of the following represents the number eight:

- a) IIII III                      b) III IN                      c) ~~IIII~~ II                      d) ~~IIII~~ III

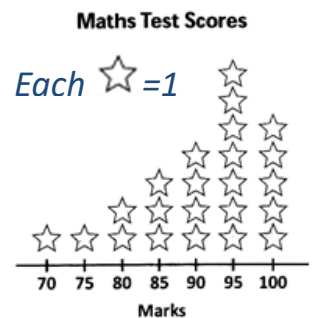
2. Representation of data in the form of pictures of objects is called\_\_\_\_\_.



- a) Raw data                      b) Tabulation                      c) Pictograph                      d) Tally marks

3. The line plot below shows how students scored on last week's maths test.

Each ☆ = 1 student. How many students scored 95 or higher on the test?

- a) 5                                      b) 7                                      c) 12                                      d) 16


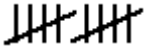
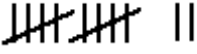




4. If  is stands for 30, how much does  stand?

- a) 6                                      b) 10                                      c) 12                                      d) 26

5. In an examination, the grades achieved by 40 students of a class are given below  
B, C, C, E, A, C, B, B, D, D, D, D, B, C, C, C, A, C, B, E, A, D, C, B, E, C, B, E, C, D, A,  
B, C, E, D, D, A, A, C, E .

What is the tally marks of grade C?







- a)  b)  c)  d) 

6) If one  symbol represents 10 children, how many children are represented

by  ?

- a) 10                                      b) 15                                      c) 20                                      d) 5

7. The following table shows number of girls in each class. Observe the pictograph and answer the question number 7,8, 9 and 10.

Class	Number of Girls in classes  = 5 girls
5 <sup>th</sup>	
6 <sup>th</sup>	
7 <sup>th</sup>	
8 <sup>th</sup>	
9 <sup>th</sup>	

(i) Which class has the minimum number of girls?

- a) 5<sup>th</sup>                      b) 6<sup>th</sup>                      c) 7<sup>th</sup>                      d) 8<sup>th</sup>

(ii) Which class has the maximum number of girls?

- a) 8<sup>th</sup>                      b) 9<sup>th</sup>                      c) 5<sup>th</sup>                      d) 6<sup>th</sup>

(iii) How many girls are there in Class 6?

- a) 15                      b) 30                      c) 25                      d) 20

(iv) What is the total number of girls in the Classes 6 to 9?

- a) 95                      b) 100                      c) 110                      d) 85

## II. ASSERTION REASONING QUESTIONS:

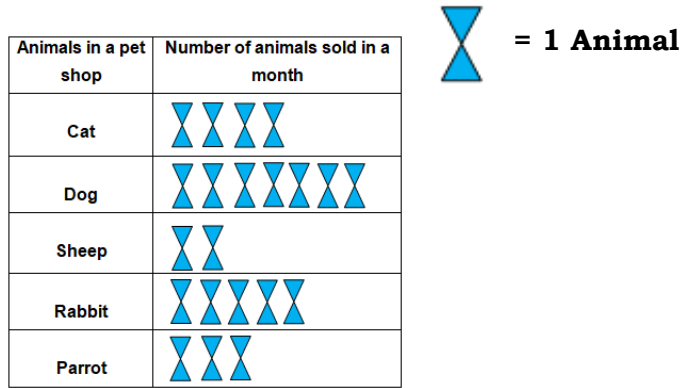
1. **Assertion:** Raw data should be arranged in tabular form for its representation.

**Reason:** Representation through tabular form and pictograph is less efficient.

- a) Both assertion and reason are true and reason is the correct explanation of assertion.
- b) Both assertion and reason are true but reason is not the correct explanation of assertion.
- c) Assertion is true but reason is false.

d) Assertion is false but reason is true.

2. The following pictograph shows the number of pet animals sold in a month. Observe the pictograph and choose the correct option.



**Assertion:** Total 7 dogs were sold in a month











**Reason:** 7 is represented as

- a) Both assertion and reason are true and reason is the correct explanation of assertion
- b) Both assertion and reason are true but reason is not the correct explanation of assertion
- c) Assertion is true but reason is false.
- d) Assertion is false but reason is true.

**III. Case study questions.**

1. The following graph shows the number of buckets filled in 2 hours from different taps. Read the graph carefully and answer the following questions.









Taps	Buckets
Tap A	
Tap B	
Tap C	
Tap D	
Tap E	
Tap F	
 = 1 full bucket  = half bucket	



- In which tap water flows the fastest? \_\_\_\_\_
- How many buckets of water is collected by tap F ? \_\_\_\_\_
- If one bucket is equal to 10L, how much water is collected from tap B? \_\_\_\_\_
- Which tap gives half the water as per given by tap D? \_\_\_\_\_
- Arrange the taps in ascending order, according to the quantity of water collected by them.

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2. The pictograph below shows how many trees each child planted. Answer the question accordingly.

William	
Noah	
Emma	
Olivia	
Liam	
Jacob	
Emily	
Ethan	

key:  equals 3 trees

- a) How many trees did William plant? \_\_\_\_\_
- b) How many trees did Emma plant? \_\_\_\_\_
- c) How many more trees did Olivia plant more than Jacob? \_\_\_\_\_
- d) How many trees did Liam plant? \_\_\_\_\_
- e) Name two people who planted the same number of trees. \_\_\_\_\_
- f) How many more trees did Emily make than Ethan? \_\_\_\_\_
- g) How many trees did Noah plant? \_\_\_\_\_

3. This table shows the average temperature of 6 fortnights during the winter season, at a hill station. Answer the following questions.

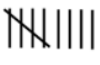
- a) Which fortnight was the coldest and which the warmest?
- b) During which fortnight is the temperature exactly double of another one?
- c) Which three months do you think this data represents?

Fortnights	Temperature
1	6°C
2	7.5°C
3	10°C
4	11.5°C
5	15°C
6	18°C

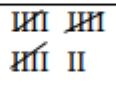
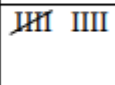
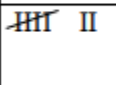
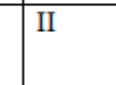
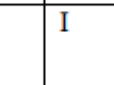
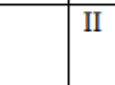
**1. Fill in the blanks**

- a) \_\_\_\_\_ is a collection of numbers gathered to give some information.
- b) To get a particular information from the given data quickly, the data can be arranged in \_\_\_\_\_ a tabular form using \_\_\_\_\_

2. Choose the correct answer.

- i) The tally mark  represents \_\_\_\_\_  
 a) 5                      b) 7                      c) 9                      d) 8
- ii) A \_\_\_\_\_ represents data through pictures of objects  
 a) Pictograph              b) Bar graph              c) Tally mark              d) none of these

3. Observe the following data and answer the following

Type of Pets	Cat	Dog	Turtles	Parrot	Rabbit	Horse
Number of students who own this pet						

- a) How many students had cats?  
 b) How many students had turtles?

4. The weight of 20 students (in kg) of a class are given below.

50	52	55	54	50	54	50	51	54	55
50	54	51	50	53	51	54	55	52	54


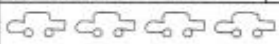


Arrange the above data in a table using tally marks.

5. In an examination, the grades achieved by 30 students of a class are given below. Arrange these grades in a table using tally marks.

**B, C, C, E, A, C, B, B, D, D, D, D, B, C, C,**

**C, A, C, B, E, A, D, C, B, E, C, B, E, C, D**

6. Mr. Rajan made a pictograph given below to show the number of cars washed at a car washing station during three days of a week.

Days	Number of cars washed	One  = 5 cars
Friday		
Saturday		
Sunday		







From the pictograph, find that:

- (a) How many cars were washed on  
 (i) Friday  
 (ii) Saturday

(iii) Sunday?

- (b) On which day the maximum number of cars were washed at the station?
- (c) On which day the minimum number of cars were washed at the station?
- (d) How many more cars were washed on Saturday than on Friday?

7 . Observe the pictograph and answer the following

Grades	Number of students	 = 10 students
A+		
A		
B		
C		
D		

- i) Which Grade was received by the minimum number of students? How many are they?
- ii) Which Grade was received by maximum number of students? How many are they?
- iii) How many students received A+ grade?
- iv) How many more students received grade A than grade B?
- v) How many students received grade C and grade D all combined?









8. The following are the weekly wages (in Rs.) of 15 workers in a factory:

**300, 250, 200, 250, 200, 150, 350, 200, 250, 200, 150, 300, 150, 200, 250**

- i) Arrange the data using tally marks
- ii) How many workers are getting Rs 350?
- iii) What is the minimum wage? How many workers are getting the minimum wages?
- iv) How many workers are getting Rs.200?



9. The sale of electric fans on different days of a week as shown below

Days	Number of fans
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	
	 = 3 fans

From the above pictograph, answer the following questions

- i) How many fans were sold on Saturday?
- ii) On which day the maximum number of fans were sold? How many are they?
- iii) If one fan was sold at the rate of Rs.1000, what was the total earning on Friday?
- iv) What is the total earning of this week?
- v) If one big carton can hold 3 fans, how many cartons were needed in the given week?

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### L-10 MENSURATION

1. The area of rectangle whose length is 15 cm and breadth is 6 cm  
 (a) 9000 cm<sup>2</sup> (b) 90 cm<sup>2</sup> (c) 9 cm<sup>2</sup> (d) 900 cm<sup>2</sup>
2. One side of a regular pentagon is 5 cm. Its perimeter is  
 (a) 10 cm (b) 25 cm (c) 15 cm (d) 50 cm
3. The distance around a two dimensional shape is  
 (a) Area (b) Perimeter (c) Diagonal (d) None of these
4. Perimeter of a triangle is 30cm. The lengths of two sides are 12cm and 8cm. The length of third side is \_\_\_\_\_  
 (a) 8cm (b) 10cm (c) 12cm (d) 20cm

5. The perimeter of a triangle with sides measuring 4 cm, 5 cm and 6cm is \_\_\_\_\_  
(a) 15cm (b) 11cm (c) 9cm (d) 20cm
6. The area of a rectangle is 120 square cm. If its length is 20cm,  
its breadth is \_\_\_\_\_  
(a) 30cm (b) 40cm (c) 60cm (d) 80cm
7. Perimeter of an equilateral triangle of length 5cm is \_\_\_\_\_  
(a) 10cm (b) 15cm (c) 20cm (d) 25cm
8. The side of a square with perimeter 10m is \_\_\_\_\_  
(a) 2m (b) 2.5m (c) 3m (d) 5m
9. Find the area and perimeter of the square whose side length is 4 meter.  
(a) 16 m<sup>2</sup> (b) 12 m<sup>2</sup> (c) 8 m<sup>2</sup> (d) 4 m<sup>2</sup>
10. Perimeter of a triangle is 30cm. The lengths of two sides are 12cm and 8cm.  
The length of third side is \_\_\_\_\_  
(a) 8cm (b) 10cm (c) 12cm (d) 20cm

**Assertion and Reasoning**

11. Assertion (A) – Area of a square = 4 × Length of a side

Reason (R) – The amount of surface enclosed by a closed figure is called its area

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

12. Assertion (A) – An athlete takes 10 rounds of a rectangular park, 40 m long and 30 m wide. The total distance covered by him is 1400m

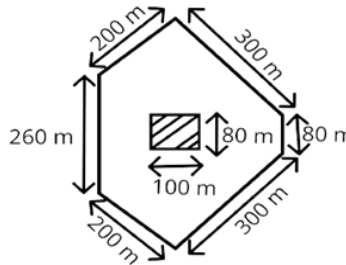
Reason (R) – The amount of surface enclosed by a closed figure is called its area

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

**CASE BASE STUDY:**

13. What is the length of the outer boundary of the park shown in Figure? What will be the total cost of fencing it at the rate of Rs 20 per meter?

There is a rectangular flower bed in the centre of the park. Find the cost of manuring the flower bed at the rate of Rs 50 per square meter.



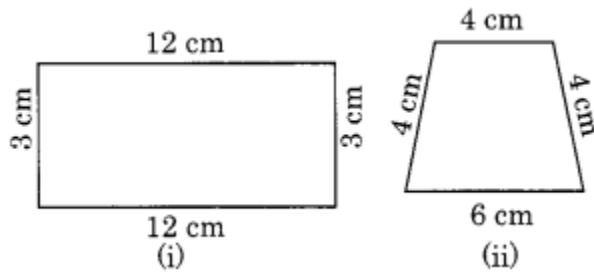
14. Cost of fencing around a square field is Rs. 12000. If the cost of fencing per metre is Rs. 30. Find the area of the square field.

15. The length of a rectangular field is 250m and the width is 150m. Khizar runs around this field 3 times.

(i) How far did he run?

(ii) How many times should he run around the field to cover a distance of 4km?

16. How much distance will you have to travel in going around each of the following figures?



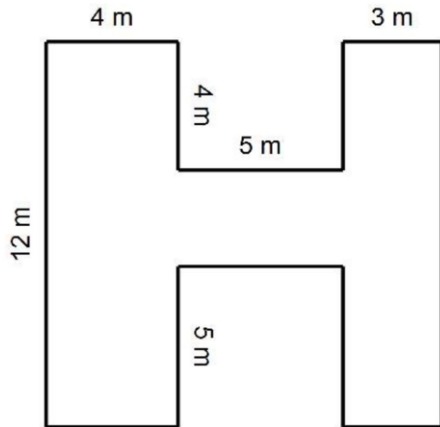
17. Find the cost of fencing a rectangular park 600 m long and 250 m wide at the rate of ₹6 per metre.

18. Two sides of a triangle are 32cm and 18cm. The perimeter of the triangle is 80cm. Find the length of its third side

19. A rectangular piece of land measures about 2.7 km by 1.2 km. Each side of the

rectangular piece is to be fenced with four rows of wires. What is the total length of the wire needed?

20. By splitting the following figure into rectangles, find their areas (The measures are given in meters).



21. How much would it cost to lay a carpet in a room 10m long and 7m wide, with a carpet that costs 115 per m<sup>2</sup>.

22. How many tiles of 10cm by 6cm will be needed to pave a rectangular path of 5m by 3m?

23. Fencing the compound of a house costs ₹5452. If the rate is ₹94 per metre, find the perimeter of the compound. If the breadth is 10 m, find its length?

24. Tina runs around a square park of side 125m. Meena runs around a rectangular park with length 150m and breadth 80m. Who covers less distance and by how much?

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**L-11 ALGEBRA**

1. Find the rule which gives the number of matchsticks required to make the following patterns. (use a variable)

- a) a pattern of letter **M**
- b) a pattern of letter **L**

2. Students are marching in a marchpast. There are 4 students in a row. What is the rule which gives the number of students given in the number of rows?

3. Shruti is drawing a dot Rangoli (a pattern of dots) with chalk powder. She has 10 dots in a row. How many dots will her Rangoli have for r rows? How many dots are there if there are 7 rows? If there are 10 rows?

4. Chocolates are to be transferred from larger boxes into smaller boxes. When a large box is emptied, the chocolates from it fill three smaller boxes and still 8 chocolates remain outside. If the number of chocolates in a small box are taken to be  $x$ , what is the number of chocolates in the larger box?

### ASSERTION REASON QUESTIONS

1.) **Assertion (A)** – The rule, which gives the number of matchsticks required to make the matchstick pattern L, is  $2n$ .

**Reason (R)** – For  $n = 1$ , the number of matchsticks required =  $2 \times 1 = 2$

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

2) **Assertion (A)** – The rule, which gives the number of matchsticks required to make the matchstick pattern F, is  $2n$

**Reason (R)** – For  $n = 3$ , the number of matchsticks required =  $2 \times 3 = 6$  etc.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true.

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### L-12 RATIO AND PROPORTION

1) The cost of a pen is ₹ 10. The cost of a pencil 1 is ₹ 2. How many times of the cost of a pencil is the cost of a pen?

- a) 5 times
- b) 2 times
- c) 10 times
- d) none of these.

2) If two ratios are equal they are in \_\_\_\_\_

- a) proportion
- b) not proportion
- c) both
- d) none of these.

3) There are 30 boys and 20 girls in a class. The ratio of the number of girls to the number of boys is

- a) 2:3
- b) 3:2
- c) 2:5
- d) 3:5

- 4) We can get equivalent ratio by multiplying or dividing the \_\_\_\_\_ by the same number  
 a) numerator            b) denominator            c) both a and b            d) none of these
- 5) The ratio 40 cm to 1 m is  
 a) 2:5                      b) 3:5                      c) 4:5                      d) 5:2
- 6) Fill in the missing numbers  $\frac{14}{21} = \frac{\quad}{3} = \frac{6}{\quad}$   
 a)  $\frac{14}{21} = \frac{7}{3} = \frac{6}{4}$             b)  $\frac{14}{21} = \frac{4}{3} = \frac{6}{5}$             c)  $\frac{14}{21} = \frac{2}{3} = \frac{6}{8}$             d)  $\frac{14}{21} = \frac{2}{3} = \frac{6}{9}$
- 7) Dividing Rs 60 between Kirti and Kiran in the ratio 1:2 gives Kirti Rs.\_\_\_\_ and Kiran Rs.\_\_\_\_  
 a) 20 & 40                      b) 40 & 20                      c) 10:50                      d) 25:35
- 9) 150 kg of oil can be filled in 10 containers. To fill 750 kg of oil, how many containers will be required?  
 a) 10                      b) 20                      c) 40                      d) 50
- 10) The salary of a month of an employee is ₹ 4000. The annual salary of the employee is  
 a) ₹ 48000                      b) ₹ 24000                      c) ₹ 12000                      d) ₹ 8000
- 11) The weight of 50 books is 10 kg. The weight of 25 books is  
 a) 5 kg                      b) 8 kg                      c) 6 kg                      d) 4 kg

### Assertion Reasoning

12. **Assertion ( A )** – In a statement of proportion , four quantities are involved .

**Reason ( R )** : First and third terms of equal ratio are extreme terms and sec and fourth terms are called middle terms.

- a) Both A and R are true and R is the correct explanation of A  
 b) Both A and R are true but R is not the correct explanation of A  
 c) A is true but R is false  
 d) A is false but R is true

13. **Assertion** : If cost of 105 envelopes is 350 then cost of 100 such envelope is Rs 100.

**Reason ( R )** : cost of one envelope is Rs 30

- a) Both A and R are true and R is the correct explanation of A  
 b) Both A and R are true but R is not the correct explanation of A

- c) A is true but R is false
- d) A is false but R is true

14. Find the ratio of

- a) 75 cm to 1.5 m.
- b) 3 weeks to 3 days
- c) 48 min to 2 hours 40 min

15. Fill in the blank box.

$$\frac{3}{8} = \frac{\square}{24}$$

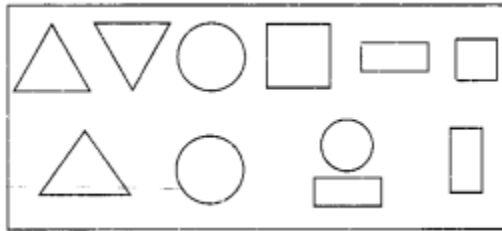
16. There are 180 students in a class. Number of girls are 75. Find the ratio of the girls to the number of boys.

17. The price of 3 m of cloth is Rs 79.50. Find the price of 15 m of such cloth.

**CASE STUDY QUESTIONS**

18. From the figure, find the ratio of

- (a) The number of squares to the number of triangles.
- (b) The number of circles to the number of rectangles.



19. Ramesh deposited ₹ 2050 in a bank and in the month of January he withdrew

₹ 410 from his account on the last date of the month. Find the ratio of

- (a) Money withdrawn to the total money deposited.
- (b) Money withdrawn to the remaining amount in the bank.

20. In a club having 100 members, 20 play Carrom, 24 play table-tennis and 16 play

Badminton and the remaining members do not play any game. No member plays more

than a game. Find the ratio of members who play

- (i) Carrom to the number of those play table-tennis.
- (ii) Table-tennis to the number to those who play badminton.
- (iii) Total members to the number of those who do not play any game.

21. Determine whether the following ratios are in proportion. Also write the middle and extreme terms if they are in proportion.

- a)  $21:6$  and  $35:10$       b)  $2:4$  and  $60:120$

22. A car travels 165 km in 3 hours

(i) How long will it take to travel 440 km?

(ii) How far will it travel in 7 hours?

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