

INTERNATIONAL INDIAN SCHOOL, DAMMAM

MIDDLE SECTION(BMS-GMS)

MIDTERM WORKSHEET (2023-24)

CLASS: VII

SUB: - MATHEMATICS

I. CHOOSE THE CORRECT OPTION:

- $(-45 \div 9) + 2$  is = \_\_\_\_\_  
a) 3    b) -3    c) 6    d) -6
- A pair of negative integers whose sum  $(-4)$  is \_\_\_\_\_  
a) (-1, -5)    b) (-1, -3)    c) (2, -2)    d) (-6, 2)
- Additive inverse of  $[(-3 \times 4) - 10]$  is \_\_\_\_\_  
a) -2    b) 120    c) -120    d) 22
- Which is the greatest of the given options?  
a)  $(-10 - 20)$     b)  $(-10 \times 20)$   
c)  $(-20 - (-10))$     d)  $(-20 \div 4)$
- The successor of  $[-15 \times 3]$  is = \_\_\_\_\_  
a) -45    b) -46    c) -43    d) -44

II. FILL IN THE BLANKS:

- The sign of the product of integers - 92, - 53, 75, - 200, 35, - 366, -8000 is \_\_\_\_\_
- $(30 \times -2)$  \_\_\_\_\_  $(200 \div -5)$  (place > or < or =)
- The sign of the quotient of  $(-5 - 7)$  and  $(-12 + 8)$  is \_\_\_\_\_

III. ASSERTION REASONING QUESTIONS:

- Assertion: The multiplicative inverse of  $(-1/8)$  is 1.  
Reason:  $(-1/8) \times (-8) = 1$ .
  - Both Assertion and Reason are correct, and Reason is the correct explanation for Assertion.
  - Both Assertion and Reason are correct, and Reason is not the correct explanation for Assertion.
  - The assertion is false, but the reason is true.
  - Both assertion and reason are false.
- Assertion:  $15 \times (-7) = -135$ .  
Reason: One positive and one negative integer multiply then give positive value.
  - Both Assertion and Reason are correct, and Reason is the correct explanation for Assertion.
  - Both Assertion and Reason are correct, and Reason is not the correct explanation for Assertion.
  - Assertion is true but the reason is false.
  - Both assertion and reason are false.

CASE STUDY QUESTION:

- In a class test containing 10 questions, 5 Marks are awarded for every correct answer and (-2) marks are awarded for every incorrect answer and 0 for questions not attempted.
  - How many marks for six correct answers?



- b) How many marks for four incorrect answers?  
c) Raj gets five correct and five incorrect answers. What is his score?
- 12) In a class test of 20 questions, 3 marks are given for every correct answer and (-2) marks are given for every incorrect answer. Gurpreet attempts all questions but only 8 of her answers are correct
1. What was Gurpreet's total score?  
(a) 14 (b) 36 (c) 16 (d) 28
  2. Her friend attempts all questions and get only 7 answers correct. What will be her score?  
(a) 10 (b) 15 (c) 9 (d) 8
  3. If Gurpreet get 10 correct answers, how much more marks she could get?  
(a) 16 (b) 14 (c) 12 (d) 18

### CHAPTER:2 FRACTIONS AND DECIMALS

- 1) What is  $\frac{1}{7}$  of 49 litres?  
(a) 11  
(b) 51  
(c) 71  
(d) 61
- 2) Find  $\frac{2}{7} \times 3$ .  
(a)  $\frac{5}{7}$   
(b)  $\frac{6}{7}$   
(c)  $\frac{1}{7}$   
(d) none of these
- 3) If  $43m = 0.086$  then m has the value  
(a) 0.002  
(b) 0.02  
(c) 2  
(d) 0.2
- 4)  $0.01 \times 0.01 =$  \_\_\_\_\_  
(a) 0.0001  
(b) 0.001  
(c) 1  
(d) 0.1
- 5) The side of an equilateral triangle is 3.5 cm. Find its perimeter.  
(a) 10.5 cm  
(b) 1.05 cm  
(c) 105 cm  
(d) None of these
- 6) Guru reads  $\frac{3}{5}$  of a book. He finds that there are still 80 pages left to be read. What is the total number of pages in the book?  
(a) 100  
(b) 200  
(c) 300  
(d) 400

7) Find the reciprocal of  $\frac{5}{8}$ .

(a)  $\frac{8}{5}$

(b) 5

(c) 8

(d) none of these

8) Assertion: Fraction is a number expressed as a quotient, in which a numerator is divided by a denominator.

Reason:  $\frac{4}{11}$  is a fraction.

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

9) Assertion:  $\frac{2}{7}$  is an improper fraction.

Reason: In improper fraction numerator is greater than denominator.

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

10) Assertion: An improper fraction is always greater than 1.

Reason:  $\frac{4}{3}$  is an improper fraction.

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

### **CASE-STUDY BASED**

11) Shalini, Amber and Anant have dinner together. The bill for the dinner is Rs.1500.

They divide it among themselves.

(i) Shalini paid  $\frac{1}{3}$  of the total bill. How much did Shalini pay?

(a) Rs. 300 (b) Rs.500 (c) Rs. 700 (d) Rs.100

(ii) Amber paid  $\frac{2}{3}$  of the total bill. How much did Amber pay?

(a) Rs. 500 (b) Rs.600 (c) Rs.700 (d) Rs.1000

(iii) How much did Anant pay for this dinner?

12) Manu wants to visit his grandparents' house in the village. The village is 350 km away from his house. He covered  $\frac{1}{5}$ <sup>th</sup> of his journey by bus,  $\frac{3}{5}$ <sup>th</sup> of his journey by train and the rest of his journey by taxi. Now answer the following questions:

a) How much distance did he cover by bus?

i) 65km    ii) 70km    iii) 60km    iv) 80km

b) How much distance did he cover by train?

i) 210km    ii) 280km    iii) 300km    iv) 200km

c) How much distance did he cover by taxi?

i) 70km    ii) 65km    iii) 80km    iv) 40km

OR

c) What is the fraction of the distance covered by bus and taxi to the total distance?

i)  $\frac{1}{5}$     ii)  $\frac{2}{5}$     iii)  $\frac{3}{5}$     iv)  $\frac{4}{5}$

13) Suman has a rectangular plot of length 3.5 m and breadth 2.7 m.

She wants to make a square lawn of side 2m in the middle of the rectangular plot.

a) What is the perimeter of the rectangular plot?

- i) 10m    ii) 12.4m    iii) 13.5m    iv) 11.7m

b) What is the perimeter of the square lawn?

- i) 4m    ii) 6m    iii) 8m    iv) 10m

c) What is the area of the rectangular plot?

- i) 9.45m    ii) 9.75m    iii) 9.9m    iv) 9.5m

OR

d) What is the difference between the area of the rectangular plot and the square lawn?

- i) 5.45m    ii) 5.75m    iii) 5.5m    iv) 5.9m

### **CH.3 DATA HANDLING**

CHOOSE THE CORRECT OPTION

1) The median of the data 20, 30, 40, 10, 15, 25, 35 is

- (a) 20    (b) 25    (c) 30    (d) 40

2) The sum of all the observations when divided by the total number of observations gives the ----- of the data

- (a) mean    (b) median    (c) mode    (d) range

3) The range of the weights (in kg) of students of a class given below is:

49, 60, 47, 50, 47, 59, 58, 45, 53

- (a) 10    (b) 15    (c) 20    (d) 2

4) A \_\_\_\_\_ is a representation of numbers using bars of uniform width

- (a) double bar graph    (b) bar graph    (c) tally marks    (d) pie chart

5)

Sale of Mathematics and English books in the year 2005, 2006, 2007 and 2008 are given below :

<b>Years</b>	<b>Mathematics</b>	<b>English</b>
2005	200	100
2006	300	250
2007	400	200
2008	500	500

In which year is the difference in the sale minimum?

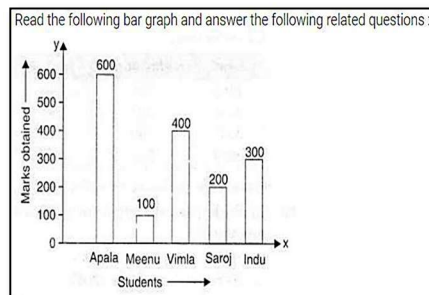
- (a) 2008    (b) 2007    (c) 2006    (d) 2005

6) The mean of first five even natural numbers is

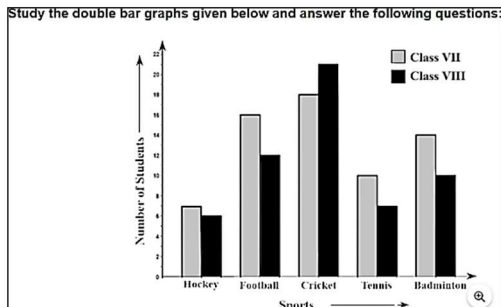
- (a) 10    (b) 6    (c) 11    (d) 8

7) Who got the maximum marks?

- (a) Apala  
(b) Meenu  
(c) Saroj  
(d) Indu



8) Study the double bar graphs given below and answer the following questions: How many students of class VII like Hockey and Tennis in all ?



- (a) 17  
 (b) 20  
 (c) 25  
 (d) 36

9) Assertion (A): Mode of the data

148, 145, 149, 151, 146, 148, 147, 149, 148, 151 and 148 is 148.

Reason (R): The most frequently occurring value in the data is called the Mode of the data.

- (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

10) Assertion: Marks scored by seven students in a class are 18, 21, 21, 32, 36, 50, 93.

Then the median is 32.

Reason: When a given data is arranged in ascending (or descending) order, then the middlemost observation is called the median of the data.

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

11) Assertion: Given set of numbers: 21, 30, 10, 4, 15.

Then Mean =  $21+30+10+4+15/4 = 80/4 = 20$ .

Reason: Mean = Sum of all observations / Number of observations

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

12) Assertion: The marks of 11 students of a class are as given below:

78, 11, 99, 63, 94, 6, 78, 36, 30, 55, 22. The range of marks is 93

Reason: Range = Highest observation – lowest observation.

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

13) Assertion (A): The median of the data 13, 16, 12, 14, 19, 12, 14, 13, 14 is 13

Reason (R): Median refers to the value which lies in the middle of the data when arranged in ascending or descending order.

- (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.

#### CH. 4: SIMPLE EQUATION

1) Write the following statement in the form of an equations “A number  $p$  is multiplied by 3 and then 5 added to it to get the answer 20”

- a)  $3p + 5 = 20$       b)  $3 + 5p = 20$       c)  $20p + 5 = 3$       d) *None of these*

2) If a rectangular Verandah has a length 3m longer than its width “ $w$ ”. Write equation for the perimeter (p) of the verandah

- a)  $p = 2(3w + w)$       b)  $p = 2(2w + 3)$       c)  $p = 2(3w + 2)$       d) *None of these*

3) -1 is not a solution of the equation

- (a)  $x + 1 = 0$       (b)  $x - 1 = 2$       (c)  $2y + 3 = 1$       (d)  $2p + 7 = 5$

4) Write the following statement in the form of an equation “The number  $b$  divided by 6 gives 5”.

- (a)  $b - 5 = 6$
- (b)  $5b = 6$
- (c)  $b + 5 = 6$
- (d)  $b/6 = 5$

5) What value of  $p$  makes the given equation true.  $p/5 + 19 = 20$

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

6) If the LHS and RHS of an equation are interchanged, then

- (a) The equation remains the same.
- (b) The value of the variable becomes half.
- (c) The value of the variable becomes double.
- (d) The value of the variable becomes zero.

7) Which of the following is the value of  $x$  such that  $5x - 12 = -2$ ?

- (a) 2
- (b) -2
- (c)  $2/3$
- (d) 10

8) Assertion (A): Expressions are formed by performing operations like addition, subtraction, multiplication and division on the variables.

Reason:  $6x - 3$  is an expression in variable  $x$ .

- a) Both A and R are true, and R is 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.

9) Assertion (A): In Isosceles triangle vertex angle is  $40^\circ$ .

Reason (R): Each base angle is  $70^\circ$

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

**CASE STUDY BASED QUESTIONS**

10) People of Sundargram planted trees in the village garden. Some of the trees were fruit trees. The number of non-fruit trees were two more than three times the number of fruit trees. What was the number of fruit trees planted if the number of non-fruit trees planted was 77?

- a) If Number of fruit tree are "f" Write equation to find Number of fruit trees?
- b) Find the total number of fruit trees in the garden?
- c) Total how many trees are there in the garden?

11) In a test Abha gets twice the marks as that of Palak. Two times Abha's marks and three times Palak's marks make 280.

- (a) If Palak gets x marks, Abha gets marks\_\_.
- (b) The equation formed is\_\_.
- (c) The solution of the equation is\_\_.
- (d) Marks obtained by Abha are\_\_\_\_\_.

12) The length of a rectangle is two times its breadth. Its perimeter is 60 cm.

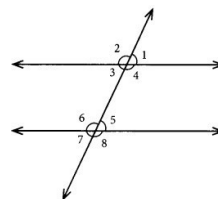
- (a) If the breadth of rectangle is x cm, the length of the rectangle is\_\_\_\_\_.
- (b) Perimeter in terms of x is.
- (c) The equation formed is\_\_.
- (d) The solution of the equation is\_\_.

**CH: 5 LINES AND ANGLES**

**MCQ (CHOOSE THE CORRECT ANSWER):**

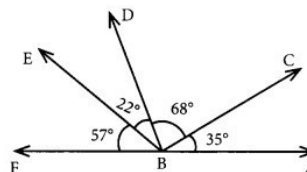
1. The measure of the complement of the angle  $40^\circ$  is (A)  $15^\circ$  (b)  $40^\circ$  (c)  $50^\circ$  (d)  $140^\circ$
2. When the sum of the measures of two angles is  $90^\circ$ , the angles are called  
 (A) Adjacent angles (b) complementary angles  
 (c) Vertically opposite angles (d) supplementary angles
3. If a transversal intersects two parallel lines, then the interior angles on the same side of the transversal are  
 (a) Vertically opposite angles (b) Supplementary angles  
 (c) Complementary angles (d) Alternate angles
4. Which of the following is false

- (a)  $\angle 1 = \angle 2$  (b)  $\angle 2 = \angle 4$
- (c)  $\angle 2 + \angle 3 = 180^\circ$  (d)  $\angle 3 + \angle 4 = 180$



5. Which angle is complementary to  $\angle CBD$ ?

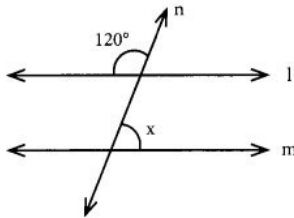
- (a)  $\angle FBC$  (b)  $\angle EBF$  (c)  $\angle ABC$  (d)  $\angle DBE$



6. If a line is a transversal to three lines, how many points of intersections are there?  
 (A) 1 (B) 2 (C) 3 (D) Infinitely many 6.

7. Find the value of  $x$  in the following figure if  $l \parallel m$

(a)  $30^\circ$  (b)  $50^\circ$  (c)  $60^\circ$  (d)  $90^\circ$



8. Find the angles which is equal to its supplement?

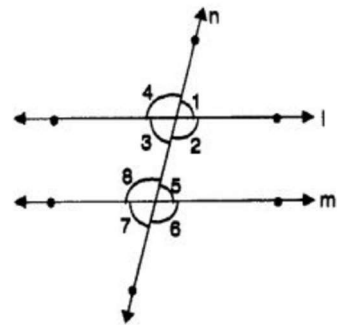
(a)  $90^\circ$  (b)  $108^\circ$  (c)  $45^\circ$  (d)  $180^\circ$

9. Which of the following pairs of angles is not a pair of complementary angles?

(a)  $60^\circ, 30^\circ$  (b)  $66^\circ, 34^\circ$  (c)  $0^\circ, 90^\circ$  (d)  $150^\circ, 30^\circ$

10. In the following figure, tell which pair of angles are not corresponding angles?

(a)  $\angle 1, \angle 5$  (b)  $\angle 2, \angle 6$  (c)  $\angle 3, \angle 7$  (d)  $\angle 3, \angle 5$



### ASSERTION REASONING QUESTIONS:

11. Assertion: If an angle formed by two intersecting lines is  $60^\circ$ , then its vertically opposite angle is  $60^\circ$

Reason: If two lines intersect each other, then the vertically opposite angles are equal.

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

12. Assertion: If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 5: 4, then the greater of the two angles is  $100^\circ$

Reason: If a transversal intersects two parallel lines, then the sum of the interior angles on the same side of the transversal is  $180^\circ$

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

## CH.14 SYMMETRY

### I. CHOOSE THE CORRECT OPTION:

1. The mirror image of 'W', when the mirror is placed vertically:

- (a) V
- (b) M
- (c) S
- (d) W

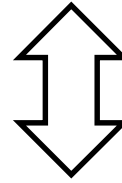


2. How many lines of symmetries are there in regular pentagon?

- (a) 3
- (b) 2
- (c) 5
- (d) 4

3. Find the number of lines of symmetry of the following figure:

- (a) 1
- (b) 2
- (c) 3
- (d) 4



4. Which of the followings has no line of symmetry:

- (a) S
- (b) A
- (c) U
- (d) H

5. The order of the rotational symmetry of the below figure about the point marked 'x'

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

## II. FILL IN THE BLANKS:

1. Rotation turns an object about a fixed point. This fixed point is called .....
2. Order of rotational symmetry of a circle is .....
3. Rhombus is a figure that has lines of symmetry and has a rotational symmetry of order .....
4. There is/are \_\_\_\_\_ lines of symmetries in an isosceles triangle.
5. A regular pentagon has \_\_\_\_\_ line of symmetry.
6. A figure has \_\_\_\_\_ symmetry if after a rotation through a certain angle. The figure looks the same.

## III. ASSERTION REASONING QUESTIONS:

6. Assertion: The letter O has many lines of symmetry.

Reason: line passing through the centre of O, will be its line of symmetry

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

7. Assertion: The symmetry of an object is defined as one half of the object is a mirror image of the other half.

Reason: E has a vertical line of symmetry.

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