MAHAVIR SENIOR MODEL SCHOOL
holidays Homework
Subject– Mathematics
GRADE VI

ASSERTION-REASON BASED QUESTION

For Q1 to Q9, choose the correct option:
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.

1. Assertion (A): The sum of two negative integers is always negative.
   Reason (R): Adding two negative numbers increases their negativity.

2. Assertion (A): Zero is an integer.
   Reason (R): Integers include all whole numbers and their negatives.

3. Assertion (A): -10 is less than -5.
   Reason (R): On a number line, numbers decrease as we move the left.

4. Assertion (A): The successor of -7 is -6.
   Reason (R): The successor of an integer is obtained by adding 1 to it.

5. Assertion (A): A regular hexagon has six lines of symmetry.
   Reason (R): A regular polygon has as many lines of symmetry as it has sides.

6. Assertion (A): The English alphabet 'H' has two lines of symmetry
   Reason (R): Reflection across the horizontal line makes the top half match the bottom half, and reflection across the vertical line makes the left match the right.

7. Assertion (A) – The alphabet E has horizontal line of symmetry
   Reason (R) – The symmetry of an object is defined as one half of the object is a mirror image of the other half.

8. Assertion (A): A square has six lines of symmetry.
   Reason (R): A line of symmetry is a line that divides the object in two identical parts.

9. Assertion (A): There are infinite lines of symmetry in a circle.
   Reason (R): The diameter is the mirror line of symmetry of a circle and there are infinite diameters possible for a given circle.

MAHAVIR SENIOR MODEL SCHOOL
WINTER BREAK HOMEWORK

GRADE VI (2025-26)

Subject: Mathematics

COMPETENCY BASED QUESTIONS

1. A number crunching machine follows these rules:

Even positive number → divide by 2

Odd positive number → subtract 1

Negative number → additive inverse

(i) Find the output when 273 and –84 are fed into the machine.

(ii) Which of the following can be an input if the output is 18?

(a) 36 (b) 19 (c) –18 (d) All of the above

2. Write the additive inverse of (–65 + 98- 35) ÷ (90 – 56 + 33 -67)

3. A submarine is at a depth of 45 m below sea level. It rises to 20 m below sea level.

(a) What is the depth of the submarine after rising?

(b) A diver is at a depth of 60 m below sea level. He spots a seaweed 23 m below him. What is the depth of the seaweed from sea level?

4. The data below shows the lowest recorded temperatures of different continents:

Africa is –110 °F, Antarctica is –1290°F, Asia is –900°F, Australia is –90°F, Europe is –670°F, North America is –810°F, South America is –270°F

(a) Arrange the continents from the lowest recorded temperature to the highest recorded temperature.

(b) Find the difference between the temperatures of Africa and South America.

5. If 8 – 8 = 0. Which of the following statements is correct?

(a) –8 is a multiplicative inverse of 8

(b) –8 is a multiplicative identity of 8

(c) –8 is the additive identity of 8

(d) –8 is the additive inverse of 8

6. If '0' represents the ground floor, '–1' represents the two-wheeler parking, and '–2' represents If the car parking:

(a) Ahmed enters the lift at floor 3 and exits at the two-wheeler parking. How many floors does the lift go down?

(b) Meera enters the lift at the car parking floor and presses '6'. How many floors up does she go?

MAHAVIR SENIOR MODEL SCHOOL

WINTER BREAK HOMEWORK

GRADE VI (2025-26)

Subject: Mathematics

Multiple Choice Questions (Q1 to Q5)

1. Which of the following is an integer?
a) 3.5 b) -7 c) 0.25 d) $\sqrt{2}$

2. The sum of (-15) and (+8) is:
a) -23 b) -7 c) +23 d) +7

3. Which of these shapes does not have any line of symmetry?
a) Circle b) Scalene triangle
c) Square d) Rectangle

4. Which statement is correct?
a) Integers include positive numbers only
b) Integers include positive, negative numbers and zero
c) Integers exclude zero
d) Integers exclude negative numbers

5. Which of these is the additive inverse of -12?
a) 12 b) -12 c) 0 d) -24

6. Evaluate:
a) (-25) + 18 + (-12) b) (-45) - (-28)
c) (-125) + 180 - (-126) d) (-12) + 8 + (-5)

7. Insert the correct symbol >, <, or = to make the statement true:
25 – 40 + 10 -98 ☐ 25 – 40 – 10 +45

8. A bird is sitting at 12 m above sea level. It dives to 8 m below sea level and then rises 15 m. Find its final position.

9. The temperature in Leh was -7°C in the morning. It dropped by 5°C at night. What was the temperature at night?

10. Write all the integers between the following pair of integers:
(a) 0 and – 4 (b) – 5 and 5
(c) – 8 and – 13 (d) 3 and 6

11. Which of the following letters has only one line of symmetry?

A, B, C, D, E, X ,G, H, M

12. Arrange the following integers in ascending order:

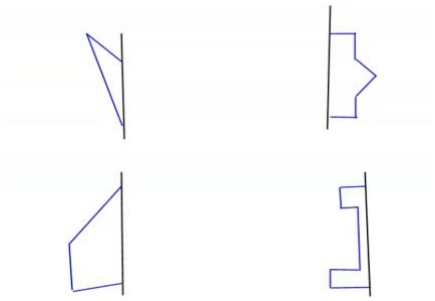
- 17, 0, 51, - 13, 18, -43, 65, -32

13. A submarine is at 250 m below sea level. It rises by 80 m and then dives 120 m deeper. Find its final position..

14. Draw the lines of symmetry for:

a) Rectangle **b) Equilateral triangle** **c) Square**

15. Complete the given pattern using symmetry. ***(Half of the figure is given for you)***



16. Give any two real-life examples of objects with symmetry.