B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL

PERIODIC TEST-1 (2025-26)
MATHEMATICS
MARKING SCHEME

Class: VII   **Time: 1 hr.**
Date: 05.07.25   **Max Marks: 25**
Admission no: **Roll no:**

Section A

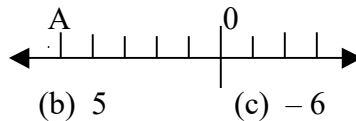**Choose the correct answer:**   **1 x 5 = 5**

1. 5 added to – 5 gives
   (a) 10   (b)-10   (c) 0   (d)-25

2. Identify which of the following pairs of angles are complementary
   (a) 65º, 115º   (b) 63º, 27º   (c) 112º, 68º   (d) 130º, 50º

3. Which number is being represented by the point A on the following number line: A

   (a) – 9   (b) 5   (c) – 6   (d) – 5

4. If two lines intersect at a point, then the vertically opposite angles are always ___
   (a) equal   (b) unequal   (c) supplementary   (d) complementary

5. Which of the following is correct
   (a) – 8 > - 7   (b) 1 < 0   (c) – 1 < 0   (d) – 2 > 4

Section B

Do as directed   **2 x 4 = 8**

6. In the adjoining figure, name the following pairs of angles.
   a. Obtuse vertically opposite angles
   b. Adjacent complementary angles
   c. Equal supplementary angles
   d. Unequal supplementary angles
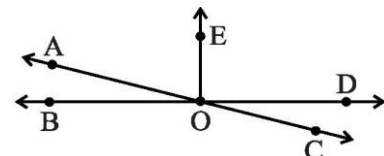
   (a) Obtuse vertically opposite angles
   ∠AOD and ∠BOC are obtuse vertically opposite angles in the given figure.

   (b) Adjacent complementary angles
   ∠EOA and ∠AOB are adjacent complementary angles in the given figure.

(c) Equal supplementary angles
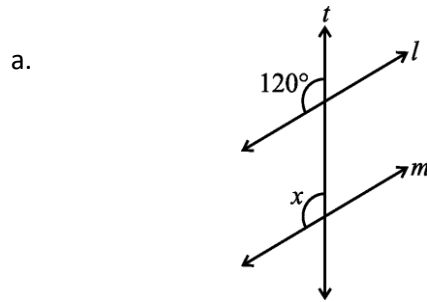∠EOB and ∠EOD are equal supplementary angles in the given figure.

(d) Unequal supplementary angles
∠EOA and ∠EOC are the unequal supplementary angles in the given figure.

7. Calculate: $1 - 2 + 3 - 4 + 5 - 6 + 7 - 8 + 9 - 10$
   $(1 - 2) + (3 - 4) + (5 - 6) + (7 - 8) + (9 - 10)$
   $5 \times (-1) = -5$

8. Lines $l \parallel m$; t is a transversal. Find the value of $\angle x$ and $\angle z$

a.

b.

Given that, l ‖ m and t is a transversal.   The sum of the interior angles on
the same side of   Also, from the given figure,   transversal is
180°
120° and x are corresponding angles. $\angle z + 60° = 180°$
Therefore, x = 120°. $\angle z = 180° - 60°$
                                                  $\angle z = 120°$
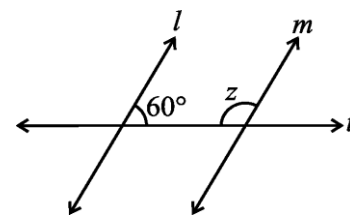
9. Write four distinct integers whose sum is -7.
   $-12 + 5 = -7$, $-1 + (-6) = -7$, $-10 + 3 = -7$, $-7 + 0 = -7$, etc .

Section C

Solve the following   **3 x 4 = 12**

10. Verify the following:
a. $18 \times [7 + (-3)] = [18 \times 7] + [18 \times (-3)]$
    Left Side (LHS):
    $18 \times (7 - 3) = 18 \times 4 = 72$
    Right Side (RHS):
    $18 \times 7 + 18 \times (-3) = 126 - 54 = 72$
    Since LHS = RHS = 72, the equality is verified.

b. $(-21) \times [(-4) + (-6)] = [(-21) \times (-4)] + [(-21) \times (-6)]$
    LHS:
    $(-21) \times [(-4-6)] = (-21) \times (-10) = 210$
    RHS:
    $(-21) \times (-4) + (-21) \times (-6) = 84 + 126 = 210$
    Since LHS = RHS = 210, this equality is also verified.

11. Evaluate each of the following:
a. $(-31) \div [(-30) + (-1)]$

First, compute the denominator
= (–30) +(–1)
= –31
= (–31) ÷ (–31)
=1

b. [(–36) ÷ 12] ÷ 3
Calculate inside the first bracket
(–36) ÷ 12 = –3
= –3 ÷ 3
= –1

c. [(– 6) + 5)] ÷ [(–2) + 1]
= (– 6 + 5) ÷ (–2 + 1)
= - 1 ÷ (-1)
= 1

12. Find the angle that is five times its complement.

Let the angle be x.
Its complement is 90–x, since complementary angles add up to 90°.
x=5×(90−x)
x=450−5x
6x=450
x=75
Complement will be 90 – 75 = 15
So the angle measures 75°, and its complement is 15°.

13. Lines $l \parallel m, p \parallel q$; Find a, b, c, d

Lines l and m are parallel: l ∥ m   l is parallel to m.
Lines p and q are parallel: p ∥ q   p is parallel to q.
One angle is given as 60∘
Angle a and the given 60∘ angle are supplementary.
a+60∘=180∘
a = 180∘−60∘
- a = 120∘
Angle b and the given 60∘
angle are alternate interior angles.
- b=60∘
Vertically opposite angles are equal.
Angle b = angle c
- c = 60∘
Angles c and angles d are supplementary.
c+d=180∘c
c+d=180∘
60∘ + d =180∘
d = 180∘−60∘
- d = 120∘
The values of the angles are
a=120∘
b=60∘
c=60∘
d=120∘