

FORMATIVE ASSESSMENT - SECOND MID TERM

MATHEMATICS

Max. Marks: 50

Std - VII

Time: 2 Hrs

Name of the School: <hr/>	Name of the Student: <hr/>
Place: <hr/>	Roll No.: <hr/>

I. Choose the correct answer:

$$10 \times 1 = 10$$

1. If C and D are supplementary angles, then which of these can be true?
 - a) Both $\angle C$ and $\angle D$ are acute angles.
 - b) Both $\angle C$ and $\angle D$ are obtuse angles
 - c) $\angle C$ is an acute angle and $\angle D$ is an obtuse angle.
2. The compliment of 45° is _____.
 - a) 90
 - b) 45
 - c) 55
3. When two lines are intersected by a third line at two distinct points, the intersecting line is called the _____.
 - a) Parallel line
 - b) perpendicular
 - c) transversal
4. The sum of any two sides of a triangle is _____ the third side.
 - a) Less than
 - b) Greater than
 - c) Equal to
5. A triangle with 2 sides equal is called a _____.
 - a) Scalene
 - b) Isosceles
 - c) equilateral
6. Sum of the angles of a triangle is _____.
 - a) 180°
 - b) 90°
 - c) 270°
7. $\text{Ext}\angle A$ of $\triangle ABC = 130^\circ$. $\angle B$ and $\angle C$ are equal. The angles are _____ each.
 - a) 60°
 - b) 65°
 - c) 70°
8. An exterior angle of a triangle measures 78° . The interior opposite angles are in the ratio $6 : 7$. The angles are _____.
 - a) 46° and 42°
 - b) 52° and 26°
 - c) 36° and 42°
9. If two lines are intersected by a transversal, then there are _____ pairs of corresponding angles.
 - a) 2
 - b) 1
 - c) 4
10. The side opposite to the right angle of a triangle is called _____.
 - a) Altitude
 - b) hypotenuse
 - c) base

II. Match the following:

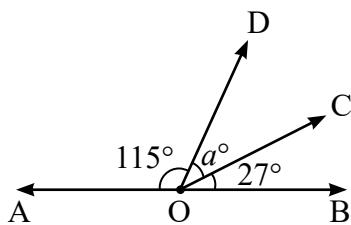
$$5 \times 1 = 5$$

1. Acute angle	-	360°
2. Right angle	-	greater than 180° and less than 360°
3. Straight angle	-	less than 90°
4. Central angle	-	90°
5. Reflex angle	-	180°

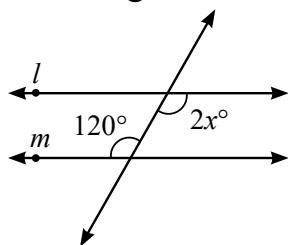
III. Answer the following: (any 10)

10 x 2 = 20

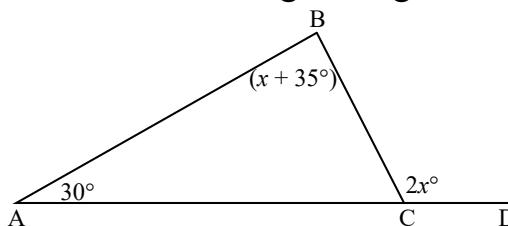
1. State the angle sum property of triangles.
2. If x° and y° are supplementary angles and $x^\circ = 130^\circ$, find y°
3. Find the value of a in the figure below:



4. If h and k are complementary angles. If h is equal to k , then what is the value of h and k ?
5. Can a triangle have the angles as 65° , 74° and 66° ? Justify your answer.
6. The angles of $\triangle ABC$ are in the ratio $5:6:7$. Find the angles of the triangle.
7. In $\triangle ABC$, $\angle A$ is 15° more than $\angle B$ and $\angle B$ is 18° less than $\angle C$. Find the measures of the angles of $\triangle ABC$.
8. Find the area of a circle whose diameter is 1.4 cm .
9. In the figure below find the value of x



10. In a triangle, if the second angle is 2 times the first angle and the third angle is 3 times the first angle, find the angles of the triangle.
11. Calculate x in the given figure and the angles of $\triangle ABC$.

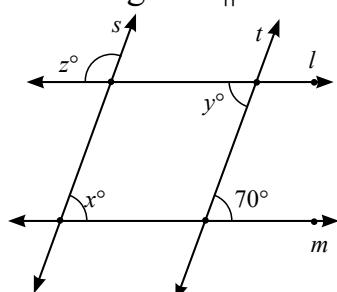


12. State SAS congruence criteria.

IV. Answer the following: (any 3)

3 x 5 = 15

1. Construct $\triangle XYZ$ right angled at X with the length of the hypotenuse 9.4 cm and the side $XY = 5.3\text{ cm}$. Measure the third side.
2. State and prove exterior angle property of triangles.
3. In the figure $l \parallel m$ and $s \parallel t$. Find the value of $x + y - z$.



4. Given $AC = AD$, $CE = DE$ and AEB is a straight line. Prove that
 - $\triangle ACE \cong \triangle ADE$
 - $\angle CEB = \angle DEB$

