

# Govt High School, Kerehalli Sorab Tq, Shivamogga Dt

## 1<sup>st</sup> Summative Assessment Examination

Class: 9 B

Sub: Mathematics

Marks: 80

### I. Answer the following Multiple Choice Questions

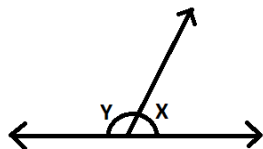
1x8=8

- A terminating decimal is  
A) a natural number    B) a rational number    C) a whole number    D) an integer
- The coefficient of  $x^2$  in the polynomial  $2x^3 + 4x^2 + 3x + 1$   
A) 2    B) 3    C) 1    D) 4
- The measurement of reflex angle is  
A)  $90^\circ$     B) between  $0^\circ$  and  $90^\circ$     C) between  $90^\circ$  and  $180^\circ$     D) between  $180^\circ$  and  $360^\circ$
- In an isosceles  $\triangle ABC$ , if  $AB=AC$  and  $\angle A=90^\circ$ , then  $\angle B$  is  
A)  $45^\circ$     B)  $80^\circ$     C)  $95^\circ$     D)  $60^\circ$
- The angle between the diagonals of a rhombus is  
A)  $45^\circ$     B)  $90^\circ$     C)  $30^\circ$     D)  $60^\circ$
- The value of  $\sqrt{144}$  is  
A) 14    B) 12    C) 16    D) 44
- How many straight lines can be drawn through a point?  
A) One    B) Two    C) Infinite    D) Zero
- The division algorithm for polynomials is  
A)  $p(x) = g(x) \times r(x) + q(x)$     B)  $q(x) = g(x) \times r(x) - p(x)$   
C)  $p(x) = g(x) \times q(x) + r(x)$     D)  $p(x) = g(x) \times q(x) - r(x)$

### II. Answer the following Questions

1x8=8

- If  $p(x) = x^3 - 1$ , then what is the value of  $p(2)$ ?
- What is the degree of a constant function?
- In figure,  $\angle X = 30^\circ$ , then find the value of  $\angle Y$ .

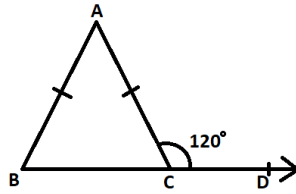


- What is the sum of all interior angles of a triangle?
- Name the quadrilateral having exactly one pair of parallel sides.
- Write the symbol for congruence.
- The value of  $(\sqrt{8} - \sqrt{5})(\sqrt{8} + \sqrt{5})$
- What are parallel lines?

### III. Answer the following Questions

2x8=16

- Represent  $\sqrt{2}$  on the number line.
- Rationalise the denominator of  $\frac{1}{\sqrt{5} + \sqrt{2}}$  and simplify.
- Write any two Euclid's postulates.



20. In the figure, find  $\angle A$

21. Construct a perpendicular bisector of line segment of length **12.5 cm**.

22. Write any two differences between a rectangle and a square.

23. State **S.A.S rule** of congruency of triangles.

24. Evaluate **98 x 96** using a suitable identity.

**IV. Answer the following Questions**

**3x9=27**

25. Visualise **3.765** on the number line using successive magnification.

26. Express **0.47** in form  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .

27. Factorise  **$2x^2+7x+3$**  by splitting the middle term.

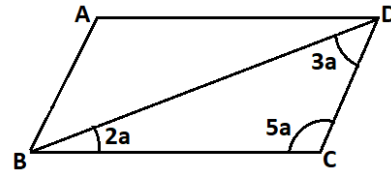
28. Expand  **$(2x-y+z)^2$**  using suitable identity.

29. Construct an angle of **105°** using compass and ruler.

30. In the figure, if **AC=BD**, then prove that **AB=CD**.

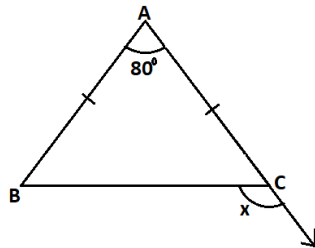


31. Prove that, "two triangles are congruent if two angles and the included side of one triangle are equal to two angles and the included side of the other triangle".



32. Find all the angles of parallelogram, in the figure.

33. In the figure below, in  $\Delta ABC$ , **AB=AC**, then calculate the value of x.



**V. Answer the following Questions**

**4x4=16**

34. Write  $\frac{3}{13}$  in decimal form and say that what kind of decimal expansion it has.

35. Factorise the polynomial  **$a^3+8b^3+64c^3-24abc$**  using suitable identity.

36. Construct a triangle ABC in which **BC=7cm**,  **$\angle B=75^\circ$**  and **AB+AC=13 cm**.

37. List the types of Quadrilaterals and write any four properties of a parallelogram.

**VI. Answer the following Questions**

**5x1=5**

38. Divide  **$p(x) = x^3+3x^2+3x+5$**  by  **$g(x)=x+2$**  and find the quotient and remainder.

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