

SUCCESS KEY TEST SERIES

First Term Exam (Sample Paper)

Std: VIII (E.M)

Subject: Mathematics

Time: 2Hrs

Date :

Chapter No. 1 to 8

Max Marks: 40

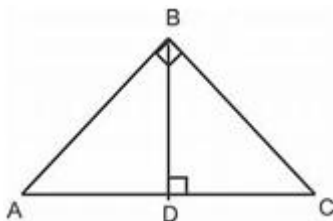
Q.1(A) Choose the correct alternative answers for each of the following questions:

4

(1) While expanding $(2x + 3y)^2$, the coefficient of xy is

- (a) 6 (b) 12 (c) 5 (d) 1

(2) Identify the orthocenter of following right angled triangle ABC, right angle at B.



- (a) D (b) A (c) C (d) B

(3) The diagonals of a rhombus are 12 cm and 16 cm long. Find the length of the side of rhombus.

- (a) 14 cm (b) 10 cm (c) 20 cm (d) 28 cm

(4) m th root of n th power of p is written as

- (a) $(p^m)^{1/n}$ (b) $(p^{1/m})^{1/n}$ (c) $(p^n)^{1/m}$ (d) $(p^m)^n$

(B) Solve the following sub questions:

3

(1) What are the factors of $x^2 - x - 12$?

(2) Write the following statement of inverse variation?

Number of pipes of same size to fill a tank and the time taken by them to fill the tank.

(3) Compare the following numbers:

$$\frac{40}{29} \text{ and } \frac{141}{29}$$

Q.2 Solve the following sub questions:

10

(1) Expand: $(58)^3$

(2) Draw a rectangle ABCD such that $l(AB) = 6.0$ cm and $l(BC) = 4.5$ cm.

(3) Find the cube roots of the following numbers.

- (1) 5832 (2) 4096

(4) Find the cube of (0.02).

(5) Simplify:

$$\frac{m^2 - n^2}{(m + n)^2} \times \frac{m^2 + mn + n^2}{m^3 - n^3}$$

Q.3 Solve any four of the following sub questions:

15

(1) Show the number $\sqrt{5}$ on the number line.

(2) Simplify: $(p + q)^3 + (p - q)^3$

(3) If $m \propto n$ and when $m = 154$, $n = 7$. Find the value of m , when $n = 14$

- (4) Construct the following quadrilateral of given measures: In \square MORE, $l(\text{MO}) = 5.8 \text{ cm}$, $l(\text{OR}) = 4.4 \text{ cm}$, $m\angle\text{M} = 58^\circ$, $m\angle\text{O} = 105^\circ$, $m\angle\text{R} = 90^\circ$.
- (5) Construct \square PQRS such that, $l(\text{QR}) = 5 \text{ cm}$, $l(\text{RS}) = 6.2 \text{ cm}$, $l(\text{SP}) = 4 \text{ cm}$, $m\angle\text{R} = 62^\circ$, $m\angle\text{S} = 75^\circ$

Q.4 Solve the following sub questions:

8

- (1) Simplify:

$$\frac{3x^2 - x - 2}{x^2 - 7x + 12} \div \frac{3x^2 - 7x - 6}{x^2 - 4}$$

- (2) A car with speed 60 km/hr takes 8 hours to travel some distance. What should be the increase in the speed if the same distance is to be covered in $7 \frac{1}{2}$ hours?

----- All the Best -----