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(Affiliated to CBSE up to +2 Level)

Half Yearly Examination (2020-21)

Class: VIII **Subject:Mathematics**

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1. Multipe choice question :

A. What least number must be subtracted from 176 to make it a perfect square?

a. 32 b. 16 c. 20 d. 7

B. The area of square field is $38\frac{11}{25}$ m^2 The lengh of one side is :

a. $\frac{38}{4}$ m b. $\frac{35}{5}$ m c. $\frac{31}{5}$ m d. $\frac{39}{5}$ m

C. A regular hexagon is inscribed in a circle of radius 10 cm. Its area in sq. cm is

a. $300\sqrt{3}$ b. 150 c. $150\sqrt{3}$ d. 600

D. The measure of the angle which is equal to its complement is

a. 30^0 b. 60^0 c.45^0 d. 90^0

E. How many elements are there in a triangle?

a. 4 b. 6 c. 3 d. 9

F. $(256)^{0.16} \times (256)^{0.09}$ is

a. 4 b. 16 c. 4 d. 256.25

G The ages of father and son are 35 years and 10 years, the ratio of their ages after 10 years is

a. 3 : 2 b. 5 : 2 c. 9 : 4 d. 15 : 2

H. The intrest on a sum of Rs. 2500 for 4 years at the interest ratr 4% is

a. Rs. 100 b. Rs. 200 c. Rs.300 d. Rs. 400

I. The perimeter of semi-circle of radius r is

a. πr b. $2\pi r$ c. $\pi r + r$ d. $\pi r + 2r$

J. $(a - b)^3 + (b - c)^3 + (c - a)^3 =$

a. $3abc$ b. $3(ab + bc + ca)$ c. $a^3+b^3+c^3$ d. none of these

2. Fill in the blanks: -

a) If a number is less than 1, its square roots is always _____ than the number.

b) The diagonal of a square = _____ x side.

c) If $x^2(x^3 -5) =0$ then degree of x is _____.

d) The daigonals of rhombus intersect each other at_____.

e) If $a + b + c = 0$, then $a^3 + b^3 + c^3$ = _____.

3. Very short answer type question : -

a) Find the smallest four digits number which is perfect square.

b) Find five rational numbers between $\frac{3}{7}$ *and* $\frac{5}{9}$.

c) If $x + y = 5$ and $xy = 4$ then find the value $x^3 + y^3$.

d) If $9^{x+2} = 240 + 9^x$, then find the value of x.