

## Class-X

## Sample Questions

1. If the coefficient of  $z$  in the quadratic equation  $z^2 + az + b = 0$  is taken as 18 place of 12 and

its roots were found to be -16 and -2. The roots of the original equation are

- (a) -12 and -6
- (b) -14 and -4
- (c) -8 and -4
- (d) -16 and -2

2. The value of  $\sqrt{8 + \sqrt{8 + \sqrt{8 + \dots}}}$  is.

- (a)  $\frac{1 + \sqrt{33}}{2}$
- (b)  $\frac{8 + \sqrt{60}}{2}$
- (c)  $\frac{8 + \sqrt{72}}{2}$
- (d)  $\frac{8 + \sqrt{42}}{2}$

3. Find the length of the median AD of the  $\triangle ABC$  whose vertices are A(7,-3), B(5,3) and C(3, -1), where D is the mid-point of the side BC.

- (a) 6
- (b) 9
- (c) 10
- (d) 5

4. If  $\sin \theta + \sin^2 \theta = 1$  then the value of  $\cos^2 \theta + \cos^4 \theta$  is:

(a) 0

(b) 1

(c) 2

(d) 4

5. A bag contains 3 white marbles, 4 red marbles and 5 black marbles. One marble is drawn at random from the bag, what is the probability that the marble drawn is neither black nor white?

(a)  $\frac{1}{4}$

(b)  $\frac{1}{2}$

(c)  $\frac{1}{3}$

(d)  $\frac{3}{4}$

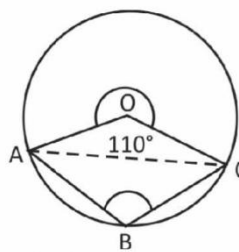
6. The measure of  $\angle B$  in the following figure is:

(a)  $65^\circ$

(b)  $115^\circ$

(c)  $120^\circ$

(d)  $125^\circ$



7. If TAIL is coded as VCKN, how is PEACE coded?

(a) RGCEG

(b) QFBDF

(c) RDZBD

(d) QECEG

8. A bag contains 12 balls out of which  $x$  are red. If three more red balls are put in the bag, the probability of drawing the red balls becomes twice the original probability, then the value of  $x$  is:
- (a) 4  
(b) 2  
(c) 6  
(d) 5
9. A tree breaks due to storm and the broken part of the tree touches the ground making an angle of  $30^\circ$  with the ground. If the distance between the foot of the tree to the point where the top touches the ground is 8m, then the height of the tree is:
- (a)  $4\sqrt{3}$  m  
(b)  $8\sqrt{3}$  m  
(c)  $16\sqrt{3}$  m  
(d)  $32\sqrt{3}$  m
10. Peter walks to his office and returns by riding bike which take him 90 minutes. On the other hand, when he goes and returns by his bike, it take him 30 minutes. If he goes and returns by walking with a uniform speed, then find the time taken by him.
- (A) 3 hours                      (B) 1.5 hours  
(C) 2 hours                      (D) 2.5 hours



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