

CBSE Class 10 Mathematics Worksheet

1. Find the zeroes of the quadratic polynomial: $x^2 + 19x + 90$?
2. A tree breaks due to storm and the broken part bends so that the top of the tree touches the ground making an angle 30° with it. The distance between the foot of the tree to the point where the top touches the ground is 8 m. Find the height of the tree.
3. It is possible to draw an equilateral right triangle with all three legs equal.
A) True
B) False
4. If the point $P(x,y)$ is equidistant from the points $A(5,1)$ and $B(-1,5)$, then prove that $3x = 2y$.
5. The value of k for which the system of eqns $kx - y = 2$ and $6x - 2y = 3$ has a unique solution is
A)
 $= 3$
B)
 $\neq 3$
C)
 $\neq 0$
D)
 $= 0$
6. If $A(4,3)$, $B(-1,y)$ and $C(3,4)$ are the vertices of a right triangle ABC , right angled at A , find the value of y .

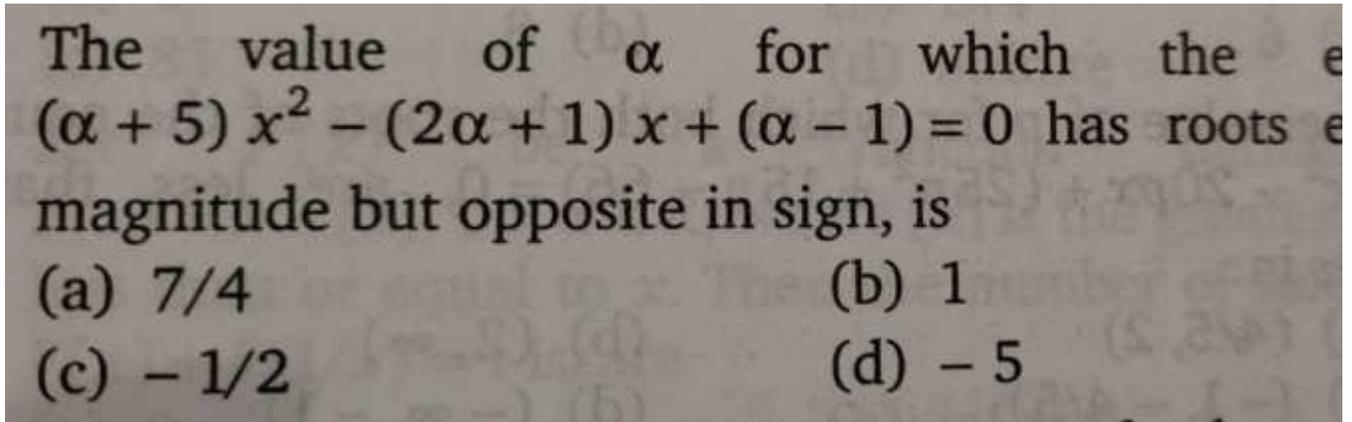
7. Find the probability of getting a number less than 5 in a single throw of a die.

8. The sum of a rational and an irrational is irrational

- A) True
- B) False

9. Cards numbered 2,3, 4, 5, 6, -----,49 are put in a box and mixed thoroughly. If one card is drawn at random
Find the probability that the number on the card is a) Even number b) prime number c) Divisible by 6
d) A perfect square

10.



A)

a

B)

b

C)

c

D)

d

11. If from twice the greater of two numbers, 20 is subtracted, the result is the other number. If from twice the smaller number, 5 is subtracted, the result is the greater number. Find the numbers.
12.
Determine the positive value of k for which the equation $x^2 + kx + 64 = 0$ and $x^2 - 8x + k = 0$ will both have real and equal roots
13.
Given $15 \cot A = 8$. Find $\sin A$ and $\sec A$
14.
 $\sin 3A = \cos(A - 26^\circ)$ where $3A$ is an acute angle, find the value of A
- A)
 30°
- B)
 29°
- C)
 31°
- D)
 32°
15. Choose the correct option: The pair of linear equations $x = 2$ and $x = 5$ has _____.
- A) No common solution
B) Infinitely many solutions
C) Unique solution
D) None of these

16.

Find a natural number whose square diminished by 84 is thrice of 8 more of given number

A)

13

B)

12

C)

14

D)

15

17.

$$\sin \phi = \cos \phi$$

So the value of $\phi = ?$

A)

90

B)

60

C)

30

D)

None Of the above

18. The perimeter of a rectangular field is 82 m and its area is 400 sq. m. Find the length and breadth of the rectangle.

19. $\sqrt{5}$ is

A)

an integer

B)

an irrational number

C)

a rational number

D)

none of these

20. Which of the following measures of central tendency takes into account all the observations?

A) Mean

B) Mode

C) Median

D) All of these

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Answers

1. - 9, - 10

2. $8\sqrt{3}$

3. Option B

Solution:

Equilateral triangles form always 60 degree angle and can never sustain a right angle within, hence it is false.

4. $3x = 2y$

5. Option B

6. $y = -2$

7. $(2/3)$

8. Option A

9. a)(1/2); b)(5/16); c)(1/6); d)(1/8)

10. Option C

11. 15, 10

12. For equation I $k = \pm 16$, ii) 16

13. $15/17, 17/8$

14. Option B

15. Option A

16. Option B

17. Option D

18. $L = 25 \text{ m}, B = 16 \text{ m}$

19. Option B

20. Option A