

Class-XI

Sample Questions

- Find the coordinates of the circumcentre of the triangle whose vertices are $(8,6)$, $(8, -2)$ and $(2,-2)$.
(A) $(5,5)$ (B) $(7,2)$
(C) $(5,2)$ (D) $(2,5)$
- Find the equation of the circle with centre $(4,-5)$ and radius $\sqrt{53}$
(a) $x^2 + y^2 - 5x + 10y = 10$
(b) $x^2 + y^2 - 6x + 12y = 12$
(c) $x^2 + y^2 - 7x + 14y = 12$
(d) $x^2 + y^2 - 8x + 10y = 12$
- Find the angle between the lines $3y - \sqrt{3}x - 12 = 0$ and $y - \sqrt{3}x + 9 = 0$
(a) 30°
(b) 90°
(c) 150°
(d) Both (A) and (C)
- If $A = \{3,5,7,9,11\}$, $B = \{7,9,11,13,15\}$, $C = \{11,13,15,17\}$, $D = \{17,19\}$, then find the value of $(A \cup D) \cup (B \cup C)$.
(a) $\{7,9,11,15\}$
(b) $\{7,9,11,17\}$
(c) $\{5,7,11,17,19\}$
(d) $\{3,5,11,19\}$
- In a group of students 200 know Hindi, 125 know English and 75 know both. Each of the students knows either Hindi or English. How many students are there in the group?

(a) 125

(b) 225

(c) 250

(d) 300

6. If the set A and B are defined as

$A = \{(x, y) : y = \frac{1}{x}, 0 \neq x \in R\}$ and $B = \{(x, y) : y = -x, x \in R\}$, then

(a) $A \cap B = A$

(b) $A \cap B = B$

(c) $A \cap B = \Phi$

(d) All of these

7. If A, B, C be three sets such that $A \cup B = A \cup C$ and $A \cap B = A \cap C$, then

(A) $A = B$

(B) $B = C$

(C) $A = C$

(D) $A = B = C$

8. If $\log_7 2 = m$, then $\log_{49} 28$ is equal to

(a) $2(1+2m)$

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

(c) $\frac{2}{1+2m}$

(d) $1+m$

9. If $x = 2^{1/3} - 2^{1/3}$, then $2x^3 + 6x =$



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(a) 0

(b) 2

(c) 3

(d) 4

10. If $\sin \theta + \cos \theta = 1$, then the general value of θ is.

(a) $2n\pi$

(b) $n\pi + (-1)^n \frac{\pi}{4} - \frac{\pi}{4}$

(c) $2n\pi + \frac{\pi}{2}$





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