If one zero of the polynomial $x^2 + 3x + k$ is 2, then the value of k.

(A) -10 (B) 10

(C) 5 (D) -5

The point of intersection of the line represented by $3x - y = 3$ and y-axis is given by

(A) $(0, -3)$ (B) $(0, 3)$

(C) $(2, 0)$ (D) $(-2, 0)$

If the quadratic equation $ax^2 + bx + c = 0$ has two real and equal roots, then 'c' is equal to

(A) $\frac{-b}{2a}$ (B) $\frac{b}{2a}$

(C) $\frac{-b^2}{4a}$ (D) $\frac{b^2}{4a}$

A card is drawn at random from a well shuffled deck of 52 playing cards. The probability of getting a face card is

(A) $\frac{1}{2}$ (B) $\frac{3}{13}$

(C) $\frac{4}{13}$ (D) $\frac{1}{13}$

The volume of a right circular cone whose area of the base is 156 cm^2 and the vertical height is 8 cm, is

(A) 2496 cm^3 (B) 1248 cm^3

(C) 1664 cm^3 (D) 416 cm^3

The circumferences of two circles are in the ratio 4 : 5. What is the ratio of their radii ?

(A) 16 : 25 (B) 25 : 16

(C) $2 : \sqrt{5}$ (D) 4 : 5

(A) The sum of two numbers is 15. If the sum of their reciprocals is $\frac{3}{10}$, find the two numbers.

OR

(B) If α and β are roots of the quadratic equation $x^2 - 7x + 10 = 0$, find the quadratic equation whose roots are α^2 and β^2.