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  $156~\rm cm^2$  and the vertical height is  $8~\rm cm$ , is

(A)  $2496 \text{ cm}^3$ 

(B)  $1248 \text{ cm}^3$ 

(C) 1664 cm<sup>3</sup>

(D)  $416 \text{ cm}^3$ 

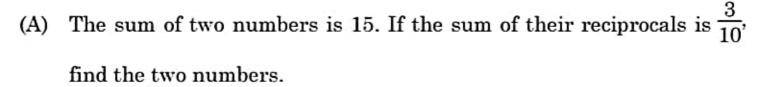
The circumferences of two circles are in the ratio 4:5. What is the ratio of their radii?

(A) 16:25

(B) 25:16

(C) 2:√5

(D) 4:5



## OR

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