

The number of roots of the equation  $\log(-2x) = 2\log(x+1)$  are

A) 3

B) 2

C) 1

D) None of these

**Correct Answer: B**

**Solution:**

Given,

$$\log(-2x) = 2\log(x+1)$$

$$\Rightarrow -2x = (x+1)^2$$

$$\Rightarrow x^2 + 4x + 1 = 0$$

$$x = \frac{-4 \pm \sqrt{16 - 4}}{2}$$

$$x = \frac{-4 \pm \sqrt{12}}{2}$$

$$x = -2 \pm \sqrt{3}$$

$$x = (-2 + \sqrt{3}), (-2 - \sqrt{3})$$