

Question#9388

Sub 26
Ques. 25

Solve the equation:

$$\log_b (x^2 + 7) = 2/3 \log_b 64$$

Solution:

$$\log_b (x^2 + 7) = \frac{2}{3} \log_b 64,$$

$$\log_b (x^2 + 7) = \log_b (64^{\frac{2}{3}}),$$

$$x^2 + 7 = 16$$

$$x^2 = 9$$

$$x = \pm 3$$

Answer:

There are two decisions: $x1 = 3, x2 = -3$.