

Answer on Question #63829 – Math – Algebra

Question

Solve the following equation:

$$3 \cdot 10^{-x} + 1 = 10$$

Solution

$$3 \cdot 10^{-x} + 1 = 10;$$

$$3 \cdot 10^{-x} = 10 - 1;$$

$$3 \cdot 10^{-x} = 9;$$

$$10^{-x} = \frac{9}{3};$$

$$10^{-x} = 3;$$

$$\lg(10^{-x}) = \lg(3);$$

$$-x = \lg(3);$$

$$x = -\lg(3).$$

Answer: $x = -\lg(3)$.