

Logarithmic Equations

Solve each logarithmic equation.

1) $\log_2 (7x+13) = \log_2 (2x+48)$

$x =$ _____

2) $\log_7 11 = \log_7 (x+31)$

$x =$ _____

3) $\log_5 (x-8) = 6 \log_5 2$

$x =$ _____

4) $\log_3 (24-2x) = 3 \log_3 6$

$x =$ _____

5) $\log_6 (6x+43) = \log_6 (9x+1)$

$x =$ _____

6) $\log_2 (x+67) = \log_2 (6x+2)$

$x =$ _____

7) $\log_4 (x+27) = \log_4 5$

$x =$ _____

8) $2 \log_6 8 = \log_6 (x+40)$

$x =$ _____

9) $\log_3 (5x-19) = \log_3 (3x+7)$

$x =$ _____

10) $\log_5 2x = \log_5 76$

$x =$ _____