

**Logarithmic Equations**

Solve each logarithmic equation.

$$\log_2 12x + \log_2 3 = \log_2 36$$

$$x = \underline{\hspace{2cm}}$$

$$\log_4 2 + \log_4 x = \log_4 8$$

$$x = \underline{\hspace{2cm}}$$

$$\log_2(x + 1) + \log_2(x - 1) = \log_2 24$$

$$x = \underline{\hspace{2cm}}$$

$$\log_5(x + 3) + \log_5(x + 3) = \log_5 49$$

$$x = \underline{\hspace{2cm}}$$