



Name

Score

Solve and show all steps.

$$3^x = 20$$

$$5^{x+1} = 70$$

$$e^{2x} = 18$$

$$2^{x-4} = 15$$

$$10^{3x} = 500$$

$$7^{-x} = 25$$

$$4^{2x+3} = 50$$

$$6^x = 2.5$$

$$8^{x-1} = 99$$

$$12^x = \frac{1}{2}$$



Solve and show all steps.

$$x = \frac{\log(20)}{\log(3)} \approx 2.727$$

$$x = \frac{\log(70)}{\log(5)} - 1 \approx 1.639$$

$$x = \frac{\ln(18)}{2} \approx 1.445$$

$$x = \frac{\log(15)}{\log(2)} + 4 \approx 7.907$$

$$x = \frac{\log(500)}{3} \approx 0.900$$

$$x = -\frac{\log(25)}{\log(7)} \approx -1.654$$

$$x = \frac{1}{2} \left(\frac{\log(50)}{\log(4)} - 3 \right) \approx -0.090$$

$$x = \frac{\log(2.5)}{\log(6)} \approx 0.511$$

$$x = \frac{\log(99)}{\log(8)} + 1 \approx 3.210$$

$$x = \frac{\log(0.5)}{\log(12)} \approx -0.279$$