

Answers

Page 313

Problem #12*

$$x=5 \text{ or } x=-13$$

Problem #19*

$$x=0$$

Problem #32*

$$x = \frac{3}{\ln \pi - 1}$$

Problem #40

$$x = \frac{4 \pm \sqrt{101}}{3} \text{ or } x = \frac{4 \pm 3.162}{3}$$

Problem #50*

$$\left(3 \left[\frac{(\log 2)(\log 6)}{\log 12} \right] \right)$$

$$x = 10$$

Problem #44*

$$x = 4 \text{ or } \frac{1}{4}$$

$$\text{NB } (\log_2 x)^2 = 4 \Rightarrow \log_2 x = \pm 2$$

$$\Rightarrow x = 2^{\pm 2}$$

$$\Rightarrow x = 4 \text{ or } \frac{1}{4}$$

Friday Work Week 11

Problem # 50

$$\log_2 x + \log_6 x = 3$$

$$\log x \left(\frac{1}{\log 2} + \frac{1}{\log 6} \right) = 3$$

$$\log x = 3 \left(\frac{\log 2 \cdot \log 6}{\log 6 + \log 2} \right)$$

$$x = 10^{\left[3 \left(\frac{\log 2 \cdot \log 6}{\log 12} \right) \right]}$$

$$x = 10^{3(0.217)} = 10^{0.6512}$$

$$x \approx 4.479$$