

$$52. \quad \begin{array}{r} -14 + 3e^x = 11 \\ +14 \quad +14 \\ \hline 3e^x = 25 \\ \frac{3e^x}{3} = \frac{25}{3} \\ e^x = 25/3 \end{array}$$

$$x \ln e = \ln 25/3$$

$$\boxed{x = 2.12}$$

$$54. \quad \begin{array}{r} 8(4^{6-2x}) + 13 = 41 \\ -13 \quad -13 \\ \hline 8(4^{6-2x}) = 28 \end{array}$$

$$8(4^{6-2x}) = 28$$

$$4^{6-2x} = 3.5$$

$$\frac{(6-2x) \log 4}{\log 4} = \frac{\log 3.5}{\log 4}$$

$$\begin{array}{r} 6-2x = 0.9037 \\ -6 \quad -6 \\ \hline -2x = -5.0963 \end{array}$$

$$\frac{-2x}{-2} = \frac{-5.0963}{-2}$$

$$\boxed{x = 2.55}$$

75-82

75. $\ln x = -3$

$$e^{-3} = x$$

$$x = .04979$$

76. $\ln x = 2$

$$e^2 = x$$

$$x = 7.3890$$

77. $\ln 2x = 2.4$

$$e^{2.4} = 2x$$

$$11.0232 = 2x$$

$$x = 5.5116$$

78. $\ln 4x = 1$

$$\frac{e^1}{4} = \frac{4x}{4}$$

$$x = .6796$$

79. $\log x = 6$

$$10^6 = x$$

$$1,000,000 = x$$

80. $\log 32 = 2$
 $\frac{10^2}{3} = \frac{32}{3}$

$$\frac{100}{3} = 2$$

81. $\frac{3 \ln 5x}{3} = \frac{10}{3}$

$$\ln 5x = \frac{10}{3}$$

$$\frac{10^{10/3}}{5} = \frac{5x}{5}$$

$$x = \frac{2154.43}{5}$$

$$x = 430.89$$

82. $\frac{2 \ln x}{2} = \frac{7}{2}$

$$\ln x = \frac{7}{2}$$

$$e^{7/2} = x$$

$$x = 33.12$$