

# Math 085 - Quiz 15

November 21, 2013

Name key

Score \_\_\_\_\_

Show all your work to receive full credit. Supply explanations when necessary.  
NO CALCULATORS ARE ALLOWED ON THIS QUIZ!

1. (2 points) Solve for  $x$ .

(a)  $2(x + 7.3) = 6x - 0.83$

$$\begin{array}{r} 2x + 14.6 = 6x - 0.83 \\ -2x \qquad -2x \\ \hline \end{array}$$

$$14.6 = 4x - 0.83$$

(b)  $9(x - 4) + 13 = 4x - 23$

$$9x - 36 + 13 = 4x - 23$$

$$\begin{array}{r} 9x - 23 = 4x - 23 \\ -4x \qquad -4x \\ \hline \end{array}$$

$$5x - 23 = -23$$

$$5x = 0$$

$$x = 0$$

$$\frac{15.43}{4} = \frac{4x}{4}$$

$$3.8575 = x$$

$$\begin{array}{r} 3.8575 \\ 4 \overline{)15.43} \\ \underline{12} \phantom{00} \\ 34 \phantom{00} \\ \underline{32} \phantom{00} \\ 23 \phantom{00} \\ \underline{20} \phantom{00} \\ 30 \phantom{00} \\ \underline{28} \phantom{00} \\ 20 \phantom{00} \\ \underline{20} \phantom{00} \\ 0 \end{array}$$

2. (1 point) Joe's last four electric bills were for \$65.10, \$85.45, \$57.20, and \$62.55. Find the average amount of these bills.

$$\frac{65.10 + 85.45 + 57.20 + 62.55}{4} = \frac{270.3}{4} = 67.575$$

3. (2 points) Solve for  $x$ .

(a)  $\frac{8}{9} = \frac{32}{x}$

$$\frac{8x}{8} = \frac{288}{8}$$

$$x = 36$$

$$\begin{array}{r} 36 \\ 8 \overline{)288} \\ \underline{24} \phantom{00} \\ 48 \phantom{00} \\ \underline{48} \phantom{00} \\ 0 \end{array}$$

$$\begin{array}{r} 67.575 \\ 4 \overline{)270.3} \\ \underline{24} \phantom{00} \\ 30 \phantom{00} \\ \underline{28} \phantom{00} \\ 23 \phantom{00} \\ \underline{20} \phantom{00} \\ 30 \phantom{00} \\ \underline{28} \phantom{00} \\ 20 \phantom{00} \\ \underline{20} \phantom{00} \\ 0 \end{array}$$

(b)  $\frac{x}{8} = \frac{9}{6}$

$$\frac{6x}{6} = \frac{72}{6}$$

$$x = 12$$