

pg 32 1.3-1.4 Quiz #1-15

$$\begin{array}{r}
 1. \quad 2(x+4) = -5x+1 \\
 2x+8 = -5x+1 \\
 \underline{-2x \quad -2x} \\
 8 = -7x+1 \\
 \underline{-1 \quad -1} \\
 -7 = -7x \\
 \underline{-7 \quad -7} \\
 x = 1
 \end{array}$$

$$\begin{array}{r}
 2. \quad \frac{1}{2}s = 4s - 21 \\
 -4s \quad -4s \\
 \underline{\hspace{1em} \hspace{1em}} \\
 -3.5s = -21 \\
 \underline{-3.5 \quad -3.5} \\
 s = 6
 \end{array}$$

$$\begin{array}{r}
 3. \quad 8.3z = 4.1z + 10.5 \\
 \underline{-4.1z \quad -4.1z} \\
 4.2z = 10.5 \\
 \underline{4.2 \quad 4.2} \\
 z = 2.5
 \end{array}$$

$$\begin{array}{r}
 4. \quad 3(b+5) = 4(2b-5) \\
 3b+15 = 8b-20 \\
 \underline{-3b \quad -3b} \\
 15 = 5b-20 \\
 \underline{+20 \quad +20} \\
 35 = 5b \\
 \underline{5 \quad 5} \\
 b = 7
 \end{array}$$

$$\begin{array}{r}
 5. \quad n+7-n=4 \\
 \underline{n-n} + 7 = 4 \\
 7 = 4 \\
 \text{No Solution}
 \end{array}$$

$$\begin{array}{r}
 6. \quad \frac{1}{4}(4r-8) = r-2 \\
 r-2 = r-2 \\
 \infty \text{ Solutions}
 \end{array}$$

$$\begin{array}{r}
 7. \quad 6x-3y=9 \\
 \underline{-6x \quad -6x} \\
 -3y = 9-6x \\
 \underline{-3 \quad -3 \quad -3} \\
 y = -3+2x
 \end{array}$$

$$\begin{array}{r}
 8. \quad 8 = 2y-10x \\
 \underline{+10x \quad +10x} \\
 8+10x = 2y \\
 \underline{\frac{8}{2} \quad \frac{10x}{2} \quad \frac{2y}{2}} \\
 4+5x = y
 \end{array}$$

$$\begin{array}{r}
 9. \quad V = \pi r^2 h \\
 \frac{V}{\pi r^2} = \frac{\pi r^2 h}{\pi r^2} \\
 h = \frac{V}{\pi r^2}
 \end{array}$$

10.

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$$10. A = \frac{1}{2}h(b+B)$$

$$2 \cdot A = \cancel{2} \cdot \frac{1}{\cancel{2}}h(b+B)$$

$$\frac{2A}{h} = \frac{h(b+B)}{h}$$

$$\frac{2A}{h} = b+B$$

$$\frac{2A}{h} - B$$

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$$\frac{2A}{h} - B = b$$

$$11. F = \frac{9}{5}C + 32 \quad \text{A}$$

$$F = \frac{9}{5}(20) + 32$$

$$F = \frac{18}{5} + 32 = 3.6 + 32$$

$$\text{Boston} = 35.6^\circ \quad \text{Portland} = 38^\circ$$

Formula in  
back  
of the  
book!

12.

$$C = 2S$$

$$50 + 10x = 2(25 + 5x)$$

$$50 + 10x = 50 + 10x \quad \text{ALWAYS true so ...}$$

The amount in  
checking is ALWAYS  
twice as much  
as the amount in  
savings



$$13. \quad \frac{I}{Pt} = \frac{Prt}{Pt}$$

$$r = \frac{I}{Pt}$$

$$r = \frac{90}{1500(2)} = 0.03$$

$$r = 3\%$$

$$14. \quad (x+2) + (2x+2) + 2 = 4x + x$$

$$\begin{array}{r} 3x + 6 = 5x \\ -3x \quad -3x \\ \hline \end{array}$$

$$\frac{6}{2} = \frac{2x}{2}$$

$$x = 3$$

$$\text{Beach Route} = (3+2) + (2 \cdot 3 + 2) = 13 \text{ miles}$$

$$\text{Park Route} = 15 \text{ miles}$$

$$15. \quad P = a + b + c$$

$$b = P - a - c$$

$$b = 42 - 10 - 17$$

$$b = 15 \text{ ft}$$