

Bellwork Alg 2A Wednesday, September 21, 2016

1. Solve this equation for B .

State restrictions on the variables.

$$\frac{B-P}{AB+Y} = W$$

2. Solve this equation for Q .

State restrictions on the variables.

$$\frac{Q}{C} + Q = \frac{E}{R}$$

3. The perimeter of a rectangle is 22. The length is five less than seven times the width. Write and solve an equation to find the dimensions of this rectangle.

4. Five consecutive multiples of five have a sum of -275 . Write and solve an equation to find these five numbers.

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Answers

1. Solve this equation for B .

State restrictions on the variables.

2. Solve this equation for Q .

State restrictions on the variables.

$$(AB+Y) \cdot \frac{B-P}{AB+Y} = W(AB+Y)$$

$$\begin{array}{r} B-P = WAB + WY \\ -WAB \quad -WAB \\ \hline B-WAB-P = WY \\ +P \quad +P \end{array} \rightarrow B-WAB = WY+P$$

$$B = \frac{WY+P}{1-WA}$$

$$AB+Y \neq 0 \quad 1-WA \neq 0$$

$$B(1-WA) = \frac{WY+P}{1-WA}$$

$$\frac{Q}{C} + Q = \frac{E}{R} \rightarrow \frac{1}{C}Q + Q = \frac{E}{R}$$

$$Q\left(\frac{1}{C} + 1\right) = \frac{E}{R}$$

$$Q = \frac{\frac{E}{R}}{\frac{1}{C} + 1} \quad C \neq 0 \quad \frac{1}{C} + 1 \neq 0$$

3. The perimeter of a rectangle is 22. The length is five less than seven times the width. Write and solve an equation to find the dimensions of this rectangle.

$$22 = 2W + 2L$$

$$22 = 2W + 2(7W-5)$$

$$22 = 2W + 14W - 10$$

$$32 = 16W \rightarrow W = 2$$

$$L = 7(2) - 5$$

$$L = 9$$

4. Five consecutive multiples of five have a sum of -275 . Write and solve an equation to find these five numbers.

$$X + X+5 + X+10 + X+15 + X+20 = -275$$

$$5X + 50 = -275$$

$$5X = -325$$

$$X = -65$$

$$-45, -50, -55, -60, -65$$