

Directions: For each situation come up with an equation, define your variables and answer the questions. SHOW WORK.

9) Mr. Bean loves collecting soda cans. He currently has 50 soda cans and gets 12 more every week.

a) What's an equation for this situation? Define your variables.

$$C = 50 + 12w$$

$C =$ total # of cans
 $w =$ weeks

b) How many soda cans will he have after 10 more weeks?

$$C = 50 + 12(10)$$

$$C = 50 + 120$$

$$C = 170 \text{ cans}$$

c) How many weeks will it take Mr. Bean to have 150 cans?

$$\begin{array}{r} 150 = 50 + 12w \\ -50 \quad -50 \\ \hline 100 = 12w \end{array}$$

$$\frac{100}{12} = \frac{12w}{12} =$$

$$w = 8.33 \text{ weeks}$$

10) Mr. Sullivan two thank you's from students when he is available in the morning. Mr. Kelly gets ten thank you's every time he helps students at lunch. The hope to get 100 THANK YOU'S from students combined.

a) What's an equation for this situation? Define your variables.

$$2s + 10k = 100$$

$s =$ # of mornings Sully works
 $k =$ # of lunches Kelly works

b) How many lunches will Mr. Kelly have to work if Mr. Sullivan works 5 mornings?

$$\begin{array}{r} 2(5) + 10k = 100 \\ 10 + 10k = 100 \\ -10 \quad -10 \\ \hline 10k = 90 \end{array}$$

$$10k = 90$$

$$\frac{10k}{10} = \frac{90}{10}$$

$$k = 9 \text{ lunches}$$

c) How many mornings will Mr. Sullivan have to work if Mr. Kelly works with kids for 5 lunches?

$$2s + 10(5) = 100$$

$$\begin{array}{r} 2s + 50 = 100 \\ -50 \quad -50 \\ \hline 2s = 50 \end{array}$$

$$2s = 50$$

$$\frac{2s}{2} = \frac{50}{2}$$

$$s = 25 \text{ mornings}$$

11) The amount of money Mr. Brust made this summer was equal to the \$55 he started with and the \$15 for every lawn he mowed while staying at his parents' house.

a) What's an equation for this situation? Define Your variables.

$$m = 55 + 15l$$

$m =$ total money \$
 $l =$ lawns mowed

b) How many lawns does he need to move if he wants to make \$800 so he can finally buy himself an iPhone?

$$\begin{array}{r} 800 = 55 + 15l \\ -55 \quad -55 \\ \hline 745 = 15l \end{array}$$

$$745 = 15l$$

$$\frac{745}{15} = \frac{15l}{15}$$

$$49.66 = l$$

c) How much money does he have if he mowed 13 yards this summer?

$$m = 55 + 13(15)$$

$$m = 55 + 195$$

$$m = \$250$$