

 **PARTY PLANNING** In Exercises 49 and 50, you are planning a birthday party for your 8-year-old cousin. You can have the party at a pizza place for \$8 per person plus \$30 for favors and a small cake or at a taco place for \$12 per person plus \$14 for a large cake.

49. How many children would you have to invite to the party for the cost to be the same for both places?

$$y = 8x + 30$$

$$y = 12x + 14$$

$$8x + 30 = 12x + 14$$

$$\begin{array}{r} -8x \\ \hline \end{array}$$

$$30 = 4x + 14$$

$$\begin{array}{r} -14 \\ \hline \end{array}$$

$$\frac{16}{4} = \frac{4x}{4}$$

$$x = 4$$

4 children

## Homework Questions?

# 7.4 Packet

#7) 10-pound mixture of peanuts + cashews  
 sells for \$5.32 per pound.

Peanuts cost \$3.60/pound

Cashews \$7.90/pound

How many of each type?

5.32  
 x 10  
 -----  
 \$53.2  
 ↑  
 total for 10 lb mix

$$\begin{aligned} 3.60p + 7.90c &= 53.2 \\ p + c &= 10 \end{aligned}$$

↑ solve for p and c by method of your choice

\*Hint: Change % into decimal by dividing by 100  
 OR using % button on calculator

#8) Job A \$30,000 plus 1% sales = 0.01  
 Job B \$24,000 plus 2% sales = 0.02

How many sales to earn same amount?

Job A:  $y = 30000 + 0.01x$

Job B:  $y = 24000 + 0.02x$

$$\begin{aligned} 30000 + 0.01x &= 24000 + 0.02x \\ - 0.01x & \quad - 0.01x \end{aligned}$$

$$\begin{aligned} 30000 &= 24000 + 0.01x \\ - 24000 & \quad - 24000 \end{aligned}$$

$$\frac{6000}{0.01} = \frac{0.01x}{0.01}$$

$$x = 600000$$

600,000 sales

# 7.4 Homework

Finish Word Problem Packet

**\*\*Reminder: Quiz Tomorrow**