

**Warm up:**

1) A TV is on sale for 45% off. If the sale price is \$640, what is the regular price?  $100\% - 45\%$

~~$$\frac{55}{100} = \frac{640}{x}$$~~

~~$$\frac{55x}{55} = \frac{64000}{55}$$~~

$$\frac{0.55x}{0.55} = \frac{640}{0.55}$$

$$x = 1163.636363$$

\$1163.64

2) Last year, there were 34 people in a local bowling league. This year there are 52. What was the percent change?

$$\frac{\text{difference}}{\text{original}} = \frac{52-34}{34} = \frac{18}{34} = 0.529411763$$

52.94%

Four less than half of a number is 17. Find the number.

$$\begin{array}{r} \frac{1}{2}x - 4 = 17 \\ + 4 \quad + 4 \\ \hline \frac{1}{2} \left( \frac{1}{2}x \right) = (21) \frac{1}{2} \\ x = 42 \end{array}$$

Two hundred twenty-five students play a team sport at Lincoln High School. These students represent  $\frac{3}{8}$  of the total student population. How many students attend the school?

$$\frac{8}{3} \left( \frac{3}{8} X \right) = \left( \frac{225}{1} \right) \frac{8}{2}$$

$$X = 600$$

600 students

$$\begin{array}{r} 4 \\ \times 75 \\ \hline 600 \end{array}$$

$$\begin{array}{r} 75 \\ 3 \overline{) 225} \\ \underline{- 210} \phantom{0} \\ 150 \\ \underline{- 150} \\ 0 \end{array}$$

One hundred twenty seniors are on the honor roll. This represents one third of the senior class. How many seniors are there?

$$\frac{1}{3} \left( \frac{1}{3} X \right) = 120$$

$$X = 360$$

360 seniors

# Showdown

$$3x + 5 = -8$$

$$\begin{array}{r} -5 \\ \hline \end{array}$$

$$\begin{array}{r} -8 - 5 \\ -8 + (-5) \end{array}$$

$$\begin{array}{r} 3x = -13 \\ \hline \end{array}$$

$$\begin{array}{r} x = -\frac{13}{3} = -4\frac{1}{3} \end{array}$$

$$\begin{array}{r} -27.82 = -8.1 - 3.4n \\ + 8.1 \quad + 8.1 \\ \hline \end{array}$$

$$\begin{array}{r} -19.72 = -3.4n \\ \hline -3.4 \end{array} \quad \begin{array}{r} -3.4n \\ \hline -3.4 \end{array}$$

$$\underline{5.8 = n}$$

$$\begin{array}{r} -27.82 \\ - 8.10 \\ \hline 19.72 \end{array}$$