5.3 Solving Percent Problems – Notes (Day 2)

Type 1: Finding the Percent

a) What percent is 48 out of 60?

$$\frac{\text{Part}}{\text{whole}} = \frac{\%}{100}$$

$$\frac{48}{60} = \frac{x}{100}$$

$$\frac{60x}{60} = \frac{4800}{60}$$

$$x = 80\%$$

top ÷ bottom

$$\frac{48}{60} = 0.8 = 80\%$$

decimal

Type 2: Finding the Part

b) What is 312% of 26?

"is" → =

"of" → x

change % to decimal

$$\frac{P}{N} = \frac{\%}{100}$$

$$\frac{x}{26} = \frac{312}{100}$$

$$\frac{100x}{100} = \frac{8112}{100}$$

$$x = 81.12$$

$$312\% = 3.12$$

$$3.12 \times 26 = 81.12$$

Type 3: Finding the Whole

c) 2.25% of a number is 72.
What is the number?

$$\frac{P}{N} = \frac{\%}{100}$$

$$\frac{72}{x} = \frac{2.25}{100}$$

$$\frac{2.25x}{2.25} = \frac{7200}{2.25}$$

$$x = 3200$$

2.25% (of) a number (is) 72.

$$\frac{0.0225 \times n}{0.0225} = \frac{72}{0.0225}$$

$$n = 3200$$

Percent Increase/Decrease:

d) The price of a carton of milk in the school cafeteria increased from \$0.95 to \$1.25.
What was the percent increase in the price?

O N

$$\%\text{ change} = \frac{\text{New Amount} - \text{Original/Old Amount}}{\text{Original amount}} \times 100$$

$$= \frac{1.25 - 0.95}{0.95} \times 100$$

$$= \frac{0.3}{0.95} \times 100$$

$$= 0.3158 \times 100 = 31.58\%$$

e) The price of a green salad decreased from \$2.50 to \$1.95.
What was the percent decrease in the price?

O N

$$\%\text{ change} = \frac{\text{New} - \text{Original}}{\text{Original}} \times 100 = \frac{1.95 - 2.50}{2.50} \times 100 = \frac{-0.55}{2.50} \times 100 = -0.22$$

$$= -22\%$$

The % decrease is 22%