

Homework #35 - Percent Change

1) Tara purchased a DVD player for \$150. Six months later, the same DVD player was selling for \$120. What was the percent of decrease in the price?

Original: 150  
 New: 120  
 Amt change: 30  
 $\therefore X$

$$\frac{30}{150} = \frac{150(x)}{150}$$

$$x = 0.20$$

20% Decrease

2) Ernie's math average for the first quarter was an 88. His second quarter average decreased by 12.5%. What was his math average for the second quarter?

Original: 88  
 New: \_\_\_\_\_  
 Amt change: X  
 $\therefore 12.5$

$$x = 88(.125) \quad | \quad 88 - 11 = 77$$

$$x = 11$$

3) Last year there were 520 students enrolled at Camp Avenue Elementary School. This year there were 572 students enrolled. What is the percent of increase?

Original: 520  
 New: 572  
 Amt change: 52

$$\frac{52}{520} = \frac{520(x)}{520}$$

$$x = 0.10$$

10% Increase

4) A manufacturing company with 450 employees begins a new product line and must increase their number of employees by 18%. How many total employees does the company now have?

Original: 450  
 New: \_\_\_\_\_  
 Amt change: X  
 $\therefore 18$

$$x = 450(.18) \quad | \quad 450 + 81$$

$$x = 81$$

531



5) Logan estimated that there were 420 people at a concert with him. The actual number of people at the concert was 375. What was the percent of error of Logan's estimate?

Original (Actual Measurement): 375       $45 = 375(x)$

New (Wrong Measurement): 420       $\frac{45}{375} = \frac{45}{375}$

Amt change: 45

$\therefore$  X

$x = 0.12$   
12% Increase

6) Joshua uses his thermometer and finds boiling point of ethyl alcohol to be 75° C. He looks in a reference book and finds the actual boiling point of ethyl alcohol is 80° C. What is his percent error?

Original (Actual Measurement): 80       $5 = 80(x)$

New (Wrong Measurement): 75

Amt change: 5

$\therefore$  X

$x = 0.0625$   
6.25% Decrease