

Section 8.1C: Percent and Change

Finding the percent increase or percent decrease

1. Find the fraction for the percent increase or decrease:

$$\frac{\text{amount of increase/decrease}}{\text{original amount}}$$

2. Express the fraction as a percent

**Example 1:**

a) Find the percent increase if 6 is increased to 10.

$$\frac{10-6}{6}$$

$$\frac{4}{6} = \boxed{66.67\%}$$

b) Find the percent decrease if 10 is decreased to 6.

$$\frac{6-10}{10} =$$

$$\frac{4}{10} = \boxed{40\%}$$

**Example 2:**

A television regularly sells for \$940. The sale price is \$611. Find the percent decrease of the sale price from the regular price.

$$\frac{940-611}{940} = \frac{329}{940} = .35 = \boxed{35\%}$$

**Example 3:**

An episode of a television series had an audience of 12% versus its usual 10%. What is the percent increase for this episode?

Comparing 12% to 10%

$$\frac{12-10}{10} = \frac{2}{10} = .2 = \boxed{20\%}$$

**Example 4:**

Suppose you paid \$1200 in taxes. During year 1, taxes decrease by 20%. During year 2, taxes increase by 20%

a) What do you pay in taxes for year 2?  $\boxed{\$1152}$

b) How do your taxes for year 2 compare with what you originally paid, namely \$1200? If the taxes are not the same, find the percent increase or decrease.

Year	Tax Paid the Year Before	% change	Taxes Paid this year
1	1200	-20%	$1200(1-.2) = 960$
2	960	+20%	$960(1+.2) = 1152$

**HW: Section 8.1 #61-68 all**

$$\frac{1200-1152}{1200} = .04 = \boxed{4\% \text{ decrease}}$$