

# 2-10 Change as Percent Notes

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## A. Percent Change

$$\text{Percent Change} = \frac{|\text{difference}|}{\text{original}}$$

Don't forget:  $\left\{ \begin{array}{l} \text{Move Decimal 2 Places Right} \\ \text{and} \\ \text{Indicate Increase/Decrease} \end{array} \right.$

Examples:

1. During the summer, a bear's heart rate is about 60 beats per minute, but it can drop to as low as 8 beats per minute during winter. What is the percent of change in a bear's heart rate from the summer rate to the winter low rate?
2. A school had 825 students enrolled last year. This year, 870 students are enrolled. Find the percent of increase.
3. The population of the United States in 1992 was about 255,374,000. In 2002, it was about 280,562,000. Find the approximate percent of increase to the nearest tenth.

## B. Percent Error

$$\text{Percent Error} = \frac{|\text{difference}|}{\text{actual}}; \text{ Move Decimal 2 Places Right}$$

Examples ~ Find the percent error in each problem.

1. You estimate that your baby sister weighs 22 pounds. She is actually 26 pounds.
2. You estimate that the bridge is 60 ft long. The bridge is actually 53 ft long.
3. You estimate the rope length to be 80 ft. The rope measures 72 ft long.
4. A carpenter estimates the roof to be 375 ft<sup>2</sup>. The rectangular roof measures 18 feet wide by 22 feet long. What is the percent error?