

Applying formulas to solving percent increase and decrease makes solving the problem easy. Use the following formulas to solve the following questions:

$$\text{Percent increase} = \frac{\text{amount of increase}}{\text{original amount}}$$

$$\text{Percent decrease} = \frac{\text{amount of decrease}}{\text{original amount}}$$

Select the best answer for the following questions and type it on the line provided.

1. Mark works as a clerk in the mall. When he started the job, he was paid \$8.00 an hour. He recently received a raise. He now earns \$9.50 an hour. Find the rate of increase in his hourly pay. \_\_\_\_\_
  - a. 13.75%
  - b. 15%
  - c. 18.75%
  - d. 20%
2. Michael bought a new DVR that was originally priced at \$115. It was on sale for \$97.00. Find the rate of decrease in the price of the DVR. \_\_\_\_\_
  - a. 15.65%
  - b. 18.5%
  - c. 20.0%
  - d. 20.65%
3. If tuition is \$7200 for 1 semester at a local college and the tuition per semester the previous year was \$8000, what is the percent of decrease in tuition? \_\_\_\_\_
  - a. 5%
  - b. 8%
  - c. 10%
  - d. 11%
4. Mario's Pizza employed 15 people in 2010. Due to the increase in prices for supplies, Mario had to reduce the number of employees to 5 in 2013. By what percent did the Mario's Pizza workforce decrease? (Round to the nearest tenth) \_\_\_\_\_
  - a. 65.7%
  - b. 66.7%
  - c. 67.5 %
  - d. 67.6%

5. The value of U.S goods to Europe increased from \$1520 million in 2006 to \$2350 million in 2007. What was the percentage increase? (Round to the nearest tenth) \_\_\_\_\_
- a. 54%
  - b. 54.6%
  - c. 55%
  - d. 55.7%
6. Julie purchased a \$35 sweater on sale for \$19.25 during an after Christmas sale at the mall. By what percent was the sweater's price decreased for the sale? \_\_\_\_\_
- a. 35%
  - b. 40%
  - c. 45%
  - d. 55%
7. Due to increased overhead costs, Papa Joe's Pizza recently raised the price of their medium pizza from \$12 to \$15. What percent of increase does this change in price represent? \_\_\_\_\_
- a. 10%
  - b. 15%
  - c. 20%
  - d. 25%
8. During their annual clearance sale, Michael's Sporting Goods offered a \$300 treadmill for \$180. What percent reduction is the treadmill's sale price? \_\_\_\_\_
- a. 35%
  - b. 40%
  - c. 55%
  - d. 60%