Math 112 - Quiz 5

March 27, 2019

Name _____

Score _____

March 26, 2019

Show all work to receive full credit. Supply explanations when necessary.

1. (2 points) Suppose you deposit \$400 into an account earning 4.35% simple interest. How much is the account worth in 5 years?

$$I = (400)(0.0435)(5) = 87$$

$$A = 400 + 87 = 487$$

\$487

2. (4 points) Grace needs \$1799 to purchase a MacBook Pro laptop computer. The store lends her the money at 7% simple interest for two years.

   (a) How much interest will she pay?

$$I = (1799)(0.07)(2) = \$251.86$$

   (b) Grace decides to pay the total amount (principal + interest) in 24 equal monthly payments. How much is each payment?

$$\frac{1799 + 251.86}{24} = \frac{2050.86}{24} \approx \$85.45$$

3. (4 points) Maria deposited \$2500 into an account earning simple interest.

   (a) How much must Maria make in interest to triple her original investment?

To have \$7500, Maria needs \$5000 in interest.

   (b) What interest rate would be required in order for her to make that amount of interest in 10 years?

$$5000 = (2500)(r)(10)$$

$$r = \frac{5000}{25000} = 0.2 = 20\%$$