Math 112 - Quiz 5
March 22, 2017

Name key

Score _____

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

1. (2.5 points) $650 is deposited into an account earning 3.5% simple interest. What is the value of the account in 4.5 years?

$$I = 650(.035)(4.5) = 102.375$$

$$A = P + I = 752.375$$

$752.38

2. (2.5 points) You have $1000 to invest. What simple interest rate is required if you wish to double your money in 10 years?

Double your money is to get $1000 in interest.

$$1000 = 1000r(10)$$

$$\Rightarrow 1 = 10r \Rightarrow r = \frac{1}{10} = 10\%$$

3. (5 points) $5000 is invested at 4.95% compounded monthly. What is the value of the account after 8 years? How much of that is interest?

$$A = 5000\left(1 + \frac{0.0495}{12}\right)^{12 \cdot 8}$$

$$\approx 7423.30$$

$A = $7423.30

$I = 7423.30 - 5000$

$= 2423.30