Math 112 - Quiz 8
April 11, 2018

Name key

Score _____

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

1. (4 points) You are offered two different investment options: 4.25% compounded daily or 4.3% compounded quarterly. Compute the effective rates and determine which option is better.

4.25 % DAILY

$$E = \left(1 + \frac{0.0425}{365}\right)^{365} - 1$$

$$\approx 0.0434$$

4.34%

4.3% MONTHLY

$$E = \left(1 + \frac{0.043}{4}\right)^{4} - 1$$

$$\approx 0.0437$$

4.37%

4.3% QUARTERLY IS BETTER

2. (3 points) Suppose you invest \$5250 into an account earning 3.25% compounded monthly. How much is in your account after 15 years?

$$A = 5250\left(1 + \frac{0.0325}{12}\right)^{12*15}$$

$$= \$8542.63$$

3. (3 points) \$400 is deposited at the end of each ~~month~~ QUARTER into an annuity earning 7.55% compounded quarterly. How much in in the account after 35 years?

$$A = \frac{400\left[\left(1 + \frac{0.0755}{4}\right)^{4*35} - 1\right]}{\left(\frac{0.0755}{4}\right)} = \$269,277.02$$