

Math 105 - Finite Mathematics - J-term 2017

Quiz 5

January 11, 2017

Name: _____

Problem 1. Sun America offered an annuity that pays 6.35% compounded monthly. What equal monthly deposit should be made into this annuity in order to have \$200,000 in 15 years?

$$\$200,000 = PMT \left(\frac{\left(1 + \frac{0.0635}{12}\right)^{180} - 1}{\frac{0.0635}{12}} \right) \approx PMT (299.6561)$$

$$PMT \approx \$667.43$$

Problem 2. American General offers a 10-year ordinary annuity with a guaranteed rate of 6.65% compounded annually. How much should you pay for one of these annuities if you want to receive payments of \$5,000 annually over the 10-year period?

$$PV = \$5000 \left(\frac{1 - \left(1 + \frac{0.0665}{1}\right)^{-10}}{\frac{0.0665}{1}} \right)$$

$$= \$35,693.18$$