

Test 2

1) 4 years, 6.37% interest, end up w/ \$15,000.

$$\$13,000 = P \times e^{(4)(0.0637)} = P \times e^{0.2548}$$

$$\$15,000 = P \times 1.290203554$$

$$P = \frac{\$15,000}{1.290203554}$$

\$11,626.07 is what needs to be invested.

$$2) a. TR: \frac{7,500 - 13,000}{13,000} = \frac{-5500}{13,000} = -0.4231$$

$$b. AR: \left(\frac{A}{P} \right)^{\frac{1}{T}} - 1$$

$$\left(\frac{7,500}{13,000} \right)^{\frac{1}{10}} - 1$$

$$0.576923077^{\frac{1}{10}} = 0.946480762 - 1 = -0.053519238$$

Annual loss of 5.35%

$$3) APY = \left(1 + \frac{0.0718}{12} \right)^{12} - 1$$

$$= 1.005983333^{12} - 1$$

$$\approx 1.074210584 - 1 = 0.074210584$$

APY = 7.42%