

Math 165: Worksheet #14 – Exponential Growth and Decay

1. Assume you invest \$5,000 in an account paying 8% interest compounded monthly. How much money will be in the account after 5 years?

2. Find the amount of money you will have after 10 years if \$15,000 is invested in accounts paying 6% interest compounded:
 - a. Annually

 - b. Quarterly

 - c. Monthly

 - d. Daily

 - e. Continuously

3. Would it be better to invest \$10,000 for 8 years at 8% interest compounded quarterly or 6.5% interest compounded continuously? Justify your answer.

4. Derek invested \$1,500 into an account that pays 9% interest compounded monthly. How long must the money be left in the account for it to grow to \$2,147.11?