MATH 1030, Practice exam2

Name:

1. ( p. 225 , exercise 51) $10,000 is invested at an APR of 5% for 20 years, what’s the total amount at that time (assume compounded monthly)

2. (p.245 Excercise 23) Find the savings plan balance after 12 months with an APR of 3% and monthly payments of $150.

3. (p.263 Excercise 15 ) A student loan of $50,000 at a fixed APR of 10% for 20 years. Please calculate the monthly payment and the total payment of the loan.

4. (p.533 Excercise 17 ) The water depth in a lake decreases at a rate of 2 inches per day because of evaporation. How much does the water depth change in 8 days? in 15 days?

5. (p.533 Excercise 25 ) A snowplow has a maximum speed of 40 miles per hour on a dry highway. Its maximum speed decreases by 1.1 miles per hour for every inch of snow on the
According to this model, at what snow depth will the plow be unable to move?

6. (p. 488 Exercise 31) The number of cells in a tumor doubles every 2.5 months. If the tumor begins as a single cell, how many cells will there be after 2 years? after 4 years?

7. (p. 489 Exercise 50) A clean-up project is reducing the concentration of a pollutant in the water supply, with a 3.5% decrease per week. What is the half-life of the concentration of the pollutant? What fraction of the original amount of the pollutant will remain when the project ends after 1 year (52 weeks)?