**Chapter 7 Practice Test**

1. Simplify each expression. *(2 points each)*
2. Write the expression in radical form. *(1 point)*
3. Write the expression in exponential form. *(1 point)*

1. Graph each function. *(2 points each)*





1. Suppose the population of a species of insects doubles every year. There are 1600 insects initially. The function gives the number of insects after x years. How many insects will there be after 3 years? *(4 points)*
2. Alex invests $12,500 in a savings account that pays 2.75% interest compounded quarterly. Write an equation to model the amount of money in the account. How much money will he have in the account after 10 years? *(4 points)*
3. A species of frog on an island initially had a population of about 350 when scientists first began studying it. Since then the population has increased by 5.5% each year. Write an equation to model the frog population. If this trend continues, how many of the frogs in the species will there be after 18 years? *(4 points)*
4. Write a recursive and explicit definition for each geometric sequence. *(2 points each)*