

Escalation Investigation

1. The price for the house you would like to buy is \$95,000. Suppose the house appreciates by 20% each year.
 - a. What is the growth rate?
 - b. What is the growth factor?
 - c. Find an equation $V(x)$ that gives you its value after x years.
 - d. What will be the value of the house in 2015?

2. The population for United States in 2000 was 1.6 million people. Suppose the population grows by 3% each year.
 - a. What is the growth rate?
 - b. What is the growth factor?
 - c. Find an equation $V(x)$ that gives you the population after x years.
 - d. What will be the population in 2020?

3. The price for gasoline has increase drastically over the past 10 years. The average price in 2000 was \$0.97. Since then the price has increased at a rate of 2.7% each year.
 - a. What is the growth rate?
 - b. What is the growth factor?
 - c. Find an equation $V(x)$ that gives you its value after x years.
 - d. What will be the price of gasoline in 2025?

Depreciation Investigation

1. The price for the 2014 Honda you would like to buy is \$12,250. Suppose the car depreciates 15% each year.
 - a. What is the decay rate?
 - b. What is the growth factor?
 - c. Find an equation $V(x)$ that gives you its value after x years.
 - d. What would the value of the car be after 1 year?
 - e. What will be the value of the car in 2025?

2. The price for the 2011 BMW you would like to buy is \$32,500. Suppose the car depreciates 7% each year.
 - a. What is the decay rate?
 - b. What is the growth factor?
 - c. Find an equation $V(x)$ that gives you its value after x years.
 - d. What would the value of the car be in 8 years?
 - e. What will be the value of the car in 2035?

3. The price for the 2010 Jeep Wrangler you would like to buy is \$21,350. Suppose the car depreciates 10% each year.
 - a. What is the decay rate?
 - b. What is the growth factor?
 - c. Find an equation $V(x)$ that gives you its value after x years.
 - d. What would the value of the car be in 5 years?
 - e. What will be the value of the car in 2020?