Name: _____ Date: _____

Exponential Growth Decay - Medium

Use y = a(1 + r)^t or y = a(1 - r)^t to answer each question.

1. A lake has 4,240 fish, and the population decreases by 5% each year. How many fish remain after 5 years?

2. A house is worth $413,000 and its value rises by 6% each year. Find its value after 3 years.

3. A house is worth $339,000 and its value rises by 4% each year. Find its value after 10 years.

4. A colony starts with 4,620 bacteria and grows by 3% each hour. How many bacteria are there after 8 hours?

5. A laptop costs $600 and depreciates by 12% each year. Find its value after 7 years.

6. You invest $19,000 in an account that earns 6% interest each year. Find the balance after 7 years.

Name: _____ Date: _____

Fresh Math

Exponential Growth Decay - Medium

Use y = a(1 + r)^t or y = a(1 - r)^t to answer each question.

7. A 500 mg dose of medicine leaves the body at a rate of 15% per hour. How much remains after 7 hours?

8. A car is bought for $7,500 and loses 12% of its value each year. Find its value after 5 years.

9. A town has 80,200 people. Its population grows by 8% each year. Find the population after 3 years.

10. An 800 mg dose of medicine leaves the body at a rate of 10% per hour. How much remains after 8 hours?

11. A car is bought for $16,500 and loses 20% of its value each year. Find its value after 10 years.

12. You invest $27,500 in an account that earns 5% interest each year. Find the balance after 9 years.

Name: _____ Date: _____

Exponential Growth Decay - Medium

Use y = a(1 + r)^t or y = a(1 - r)^t to answer each question.

13. You invest $19,500 in an account that earns 2% interest each year. Find the balance after 10 years.

14. A colony starts with 1,690 bacteria and grows by 8% each hour. How many bacteria are there after 10 hours?

15. A car is bought for $10,000 and loses 5% of its value each year. Find its value after 2 years.

16. A car is bought for $10,500 and loses 5% of its value each year. Find its value after 4 years.

Exponential Growth Decay - Medium - Answer Key

1. A lake has 4,240 fish, and the population decreases by 5% each year. How many fish remain after 5 years?

   about 3,281 fish

2. A house is worth $413,000 and its value rises by 6% each year. Find its value after 3 years.

   $491,889.61

3. A house is worth $339,000 and its value rises by 4% each year. Find its value after 10 years.

   $501,802.81

4. A colony starts with 4,620 bacteria and grows by 3% each hour. How many bacteria are there after 8 hours?

   about 5,852 bacteria

5. A laptop costs $600 and depreciates by 12% each year. Find its value after 7 years.

   $245.21

6. You invest $19,000 in an account that earns 6% interest each year. Find the balance after 7 years.

   $28,568.97

Exponential Growth Decay - Medium - Answer Key

7. A 500 mg dose of medicine leaves the body at a rate of 15% per hour. How much remains after 7 hours?

   about 160.3 mg

8. A car is bought for $7,500 and loses 12% of its value each year. Find its value after 5 years.

   $3,957.99

9. A town has 80,200 people. Its population grows by 8% each year. Find the population after 3 years.

   about 101,029 people

10. An 800 mg dose of medicine leaves the body at a rate of 10% per hour. How much remains after 8 hours?

    about 344.4 mg

11. A car is bought for $16,500 and loses 20% of its value each year. Find its value after 10 years.

    $1,771.67

12. You invest $27,500 in an account that earns 5% interest each year. Find the balance after 9 years.

    $42,661.53

Exponential Growth Decay - Medium - Answer Key

13. You invest $19,500 in an account that earns 2% interest each year. Find the balance after 10 years.

    $23,770.39

14. A colony starts with 1,690 bacteria and grows by 8% each hour. How many bacteria are there after 10 hours?

    about 3,649 bacteria

15. A car is bought for $10,000 and loses 5% of its value each year. Find its value after 2 years.

    $9,025.00

16. A car is bought for $10,500 and loses 5% of its value each year. Find its value after 4 years.

    $8,552.32