**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Algebra II Advanced - Assignment 2-5**

3-26 Each table below represents an exponential function of the form y = abx. Copy and complete each table and find the corresponding rule.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a. x | y |  | b. x | y |
| 0 | 1.8 |  | 0 | 5 |
| 1 | 5.76 |  | 1 |  |
| 2 | 18.432 |  | 2 | 245 |
| 3 |  |  | 3 |  |
| 4 |  |  | 4 |  |

Rule for a. y = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Rule for b. y = \_\_\_\_\_\_\_\_\_\_\_\_\_\_

3-27 Brianna is working on her homework. Her assignment is to come up with four representations for an exponential function of her choosing. She decides it is easier to start by writing an equation, so she chooses y = 1200. Help Brianna create the other three components of the web (table, graph and related real-life situation)

3-39 Each table below represents an exponential function in y = abx form. Copy and complete each table on your paper and find a corresponding rule.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a. x | y |  | b. x | y |
| -1 | 3 |  | 0 |  |
| 0 |  |  | 1 |  |
| 1 | 75 |  | 2 | 96.64 |
| 2 |  |  | 3 | 77.312 |
| 3 |  |  | 4 |  |

Rule for a. y = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Rule for b. y = \_\_\_\_\_\_\_\_\_\_\_\_\_\_

3-40 Tickets for a concert have been in incredibly high demand, and as the date for the concert draws closer, the price of tickets increases exponentially. The cost of a pair of tickets was $150 yesterday, and today it is $162. As you complete (a) through (c) below, assume that each day’s percent increase from the day before is the same.

1. What is the daily rate of increase? What is the multiplier?
2. What will be the cost of a pair of concert tickets one week from now?
3. What was the cost of tickets two weeks ago?

3-41 Dusty won $125,000 on the *Who Wants to be a Zillionaire?* game show. He decides to place the money in an account that earns 6.25% interest compounded annually and plans not to use any of it until he retires.

1. Write an expression that represents how much money Dusty will have in *t* years.
2. How much money will be in the account when he retires in 23 years?

**Algebra I Review**

Evaluate each function for the given values of x.

1. f(x) = 2x – 6. Find: a. f(-1) b. f(1)
2. g(x) = . Find: a. g(-1) b. g(1)
3. h(x) = 2x2 – 3x. Find: a. h(3) b. h(-2.5)

4. i(x) = . Find: a. i(-1) b. i()