Exponentials- Study Guide

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| 1. Label and explain the following exponential equations: | | |
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Determine whether the table represents an *exponential growth function*, an *exponential decay function*, *linear*, or *neither*. Make sure to explain your reasoning.

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | *x* | 0 | 1 | 2 | 3 | | *y* | 2 | 4 | 12 | 48 | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | *x* | 0 | 1 | 2 | 3 | | *y* | 270 | 90 | 30 | 10 | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | *x* | -1 | 0 | -1 | -2 | | *y* | -4 | 0 | 4 | 8 | |

Find the value of *a,b, and r.* Determine whether the data represents an *exponential growth function*, an *exponential decay function*. Make sure to explain your reasoning.

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| 1. Graph   TA: C:\cur_proj\Word Files\Arts\PNGs\HSAlg1_ab_0600_001.png | |  |  | | --- | --- | | **X** | **Y** | | -4 |  | | -2 |  | | 0 |  | | 2 |  | | 4 |  | |  |
| 1. TA: C:\cur_proj\Word Files\Arts\PNGs\HSAlg1_ab_0600_002.png Graph | |  |  | | --- | --- | | **X** | **Y** | | -4 |  | | -2 |  | | 0 |  | | 2 |  | | 4 |  | |  |

Evaluate the function for the given value of *x*.

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Write an equation to model the situation. Be sure to label the parts of your equation.

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| 1. You are brushing your teeth and you have 4 bacterial. They double every hour. | 1. You have 5 weeds in the yard. They triple every hour. | 1. There are 3 zombies. They increase by 10% every hour. | 1. There were once 1,000 dodo birds. Their population was cut down by 15% every day. |