**Station 1: Graphing Exponentials**

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| 1. Graph the following | 1. Graph the following |
| 1. Graph the following | 1. Graph the following |

**Station 2: Characteristic of Exponentials**

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| 1. **Graph the following and fill in information below**     Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  X-intercept: \_\_\_\_\_\_\_\_\_\_ y-intercept: \_\_\_\_\_\_\_\_\_\_\_\_\_  Interval of Increase: \_\_\_\_\_\_\_\_\_\_    Interval of Decrease: \_\_\_\_\_\_\_\_\_\_\_  Maximum(s): \_\_\_\_\_\_\_\_\_\_\_\_\_Minimum(s):\_\_\_\_\_\_\_\_\_\_\_\_  Symmetry: \_\_\_\_\_\_\_\_\_\_\_\_\_Negative:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  End- Behavior:  Find the average rate of change from x=1 to x=2: | 1. **Graph the following and fill in information below**     Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  X-intercept: \_\_\_\_\_\_\_\_\_\_ y-intercept: \_\_\_\_\_\_\_\_\_\_\_\_\_  Interval of Increase: \_\_\_\_\_\_\_\_\_\_    Interval of Decrease: \_\_\_\_\_\_\_\_\_\_\_  Maximum(s): \_\_\_\_\_\_\_\_\_\_\_\_\_Minimum(s):\_\_\_\_\_\_\_\_\_\_\_\_  Symmetry: \_\_\_\_\_\_\_\_\_\_\_\_\_Negative:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  End- Behavior:  Find the average rate of change from x=1 to x=2: |

**Station 3: Transformation of Exponentials**

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| 1. State the transformation for the following equation | 1. State the transformation for the following equation |
| 1. Given the parent function . Write the equation of the graph that is reflected over the x-axis and shift to the left 6. | 1. Given the parent function . Write the equation of the graph that is stretched by 3 and shifted up 11. |

**Station 4: Solving Exponentials**

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| 1. Solve the following for x | 1. Solve the following for x |
| 1. Solve the following for x | 1. Solve the following for x |

**Station 5: Word Problems with Exponentials**

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| 1. Luke deposits $2000 into a bank account that pays 5% interest compounded monthly. Find the balance in the account after 4 years. | 1. A certain radioactive element decays at a rate of 21% per month. If the starting amount was 32 ounces, how much will be left after 1 year? |
| 1. Given Determine if the function is growth or decay. Then determine its growth/decay factor and its growth/decay percent. What is the initial amount? | 1. The value of Barbie Real Dream House is $12,500,000. The house is in a prime location and appreciates at a rate of 7% per year. How much will the house be worth in 5 years? |

**Station 6: Geometric sequences**

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| 1. Write both the explicit (closed) and recursive formula for the following sequence: 42, 336, 2688,… | 1. Write both the explicit (closed) and recursive formula for the following sequence: 1250, 250, 50,… |
| 1. Find the **third** term of the sequence whose first term is 10, and the **recursive** formula is . | 1. Find the 17th term of the sequence |