

# AA4 Day 5 HW

Name \_\_\_\_\_

Date \_\_\_\_\_ Hour \_\_\_\_\_

## Worksheet 3 Graphing exponential functions

Identify each transformation from the parent function of  $f(x)=B^x$ . Tell if the function is a decay or growth function.

1.  $g(x) = 3^{x-2}$

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2.  $g(x) = \frac{1}{2}^x + 3$

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3.  $g(x) = 4^x - 6$

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4.  $g(x) = \frac{2^{x-5}}{3} + 4$

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5.  $g(x) = 2^{x-7} + 5$

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6.  $g(x) = (2^{x-1}) + 2$

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Write the function for each graph described below.

7. the graph of  $f(x) = 2^x$ , stretched vertically by a factor of 2, translated up 2 units, and right 2 units.

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8. The graph of  $f(x) = \frac{1}{3}^x$ , translated up 5 units.

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9. The graph of  $f(x) = 3^x$ , left 2 units, and down 3.

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10. The graph of  $f(x) = \frac{1}{2}^x$ , translated down 2 units, and right 3.

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11. The graph of  $f(x) = 4^x$ , stretched horizontally by a factor of 3.

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12. The graph of  $f(x) = 2^x$ , up 4 units, right 3.

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