

9.1 Corrective Assignment – Exponential Growth

Algebra 2

Name: _____ ID: 1

Date: _____ Period: _____

1. Next to each function, write “yes” if it is an **exponential** function. If the answer is “no”, write an explanation why not.

a) $y = -0.5 \left(-\frac{3}{5}\right)^x$

b) $y = 6(0.24)^x$

c) $y = 7x^2$

d) $y = -0.2(3)^{-x}$

e) $y = 4x^8$

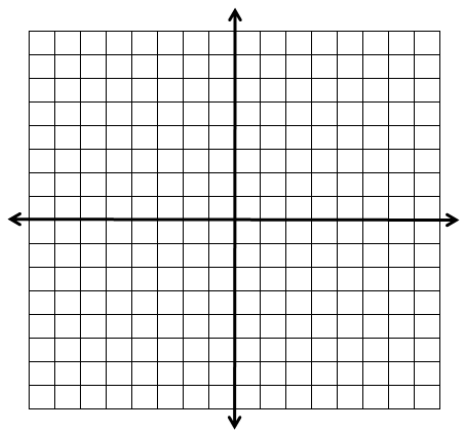
f) $y = 4(-3)^x$

g) $y = -3(4)^x$

h) $y = 3(4)^{-x}$

Sketch the graph of each exponential function by doing the following: Sketch the asymptote, label at least **three distinct coordinate points** on each graph, and write the domain and range of each function.

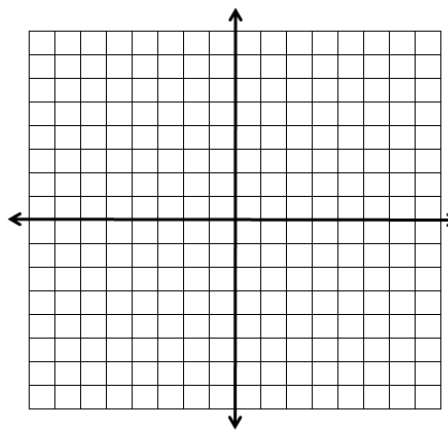
2. $y = 2(4)^x$



Domain:

Range:

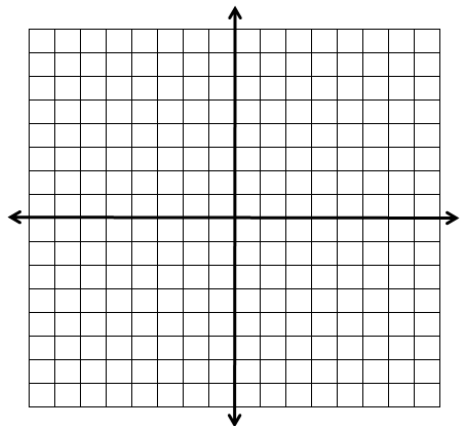
3. $y = -2^x$



Domain:

Range:

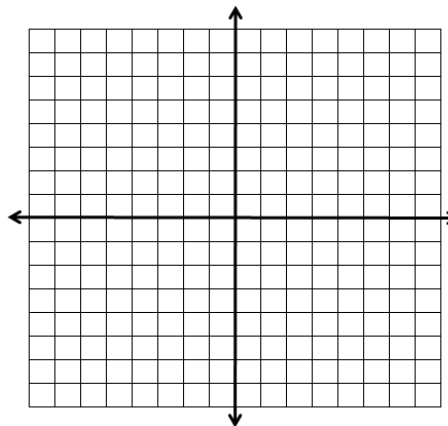
4. $y = -3(3)^{x-2} + 1$



Domain:

Range:

5. $y = (2)^{x+1} - 2$



Domain:

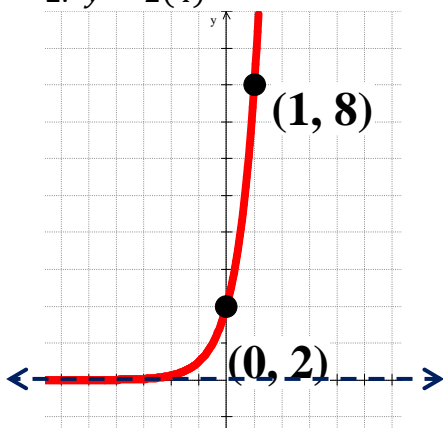
Range:

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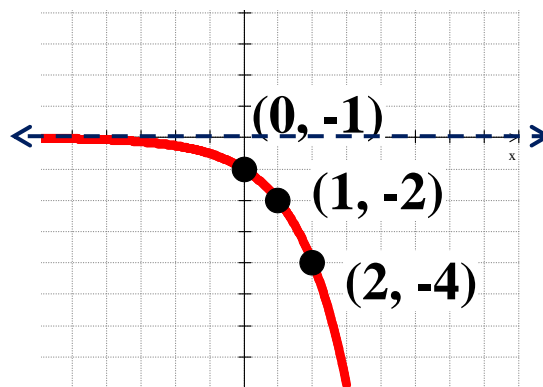
- 1 a) No. The base b , must be a positive number other than one.
- b) Yes.
- c) No. The variable must be in the exponent, not the base.
- d) Yes.
- e) No. The variable must be in the exponent, not the base.
- f) No. The base b , must be a positive number other than one.
- g) Yes.
- h) Yes.

2. $y = 2(4)^x$



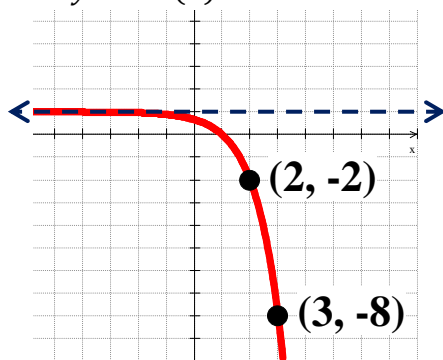
Domain: All real numbers. Range: $y > 0$

3. $y = -2^x$



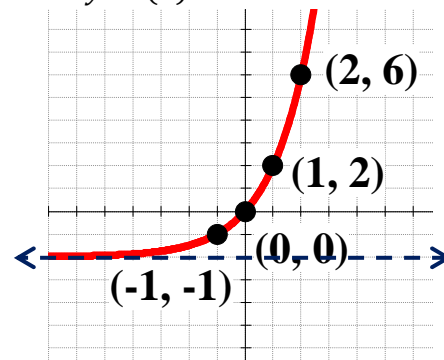
Domain: All real numbers. Range: $y < 0$

4. $y = -3(3)^{x-2} + 1$



Domain: All real numbers. Range: $y < 1$

5. $y = (2)^{x+1} - 2$



Domain: All real numbers. Range: $y > -2$