

Name \_\_\_\_\_ Due Date \_\_\_\_\_ Period \_\_\_\_\_

### Unit 4 Review: Graphing and Exponential

Directions: Please complete the following review before the test tomorrow. You will trade this completed review for a test.

Please solve the following equations using your knowledge of Exponents:

1)  $25 = 5^{7-\frac{x}{2}}$

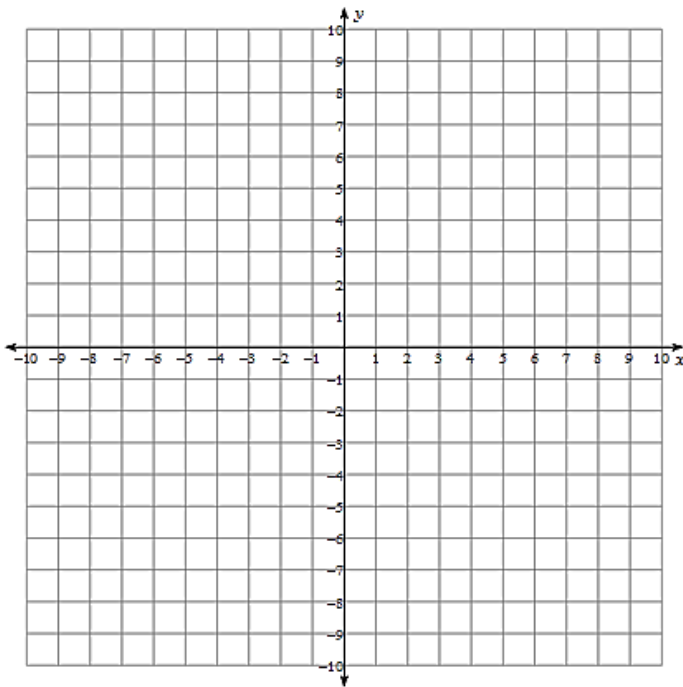
2)  $9^{6x-9} = 729$

3)  $1 = 7^{4+2x}$

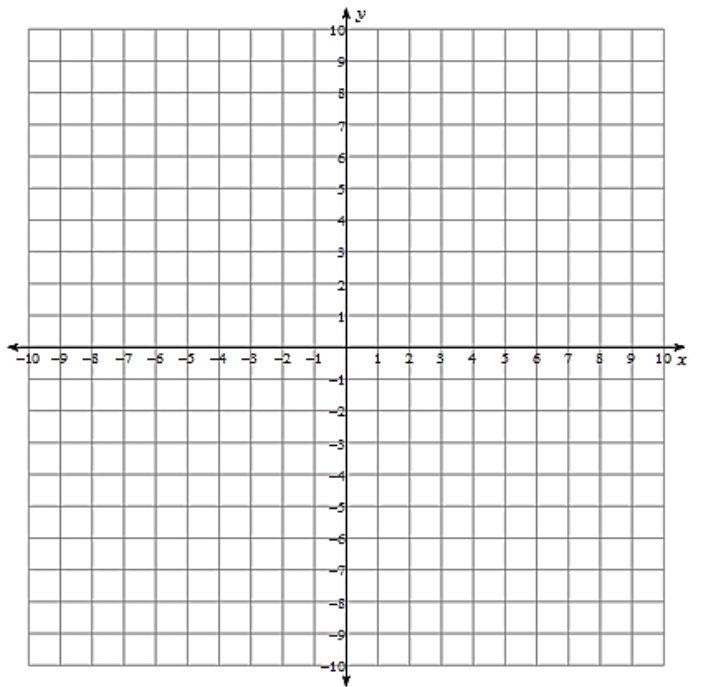
4)  $13^{\frac{x+2}{5}} = 28561$

Please graph the following equations or inequalities and decide if the given point is a solution to the equation or inequality:

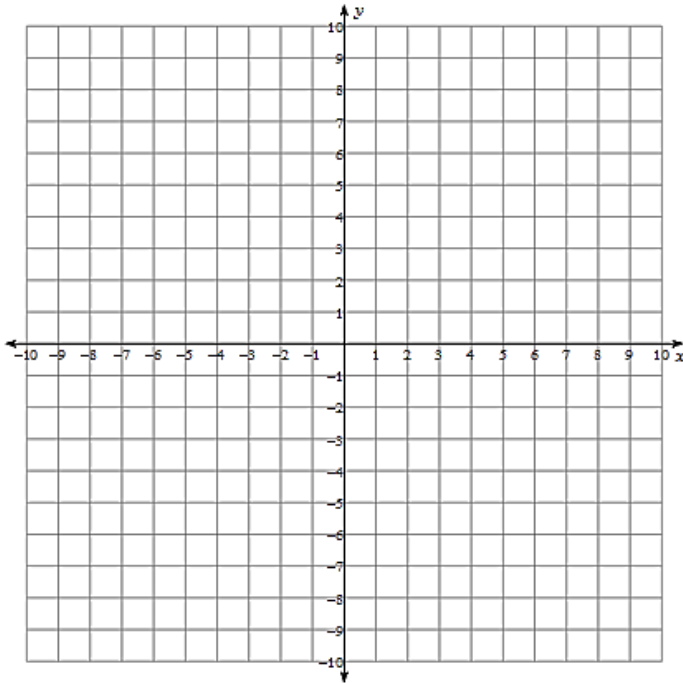
1)  $5x - 2y = -2$       (0,1)



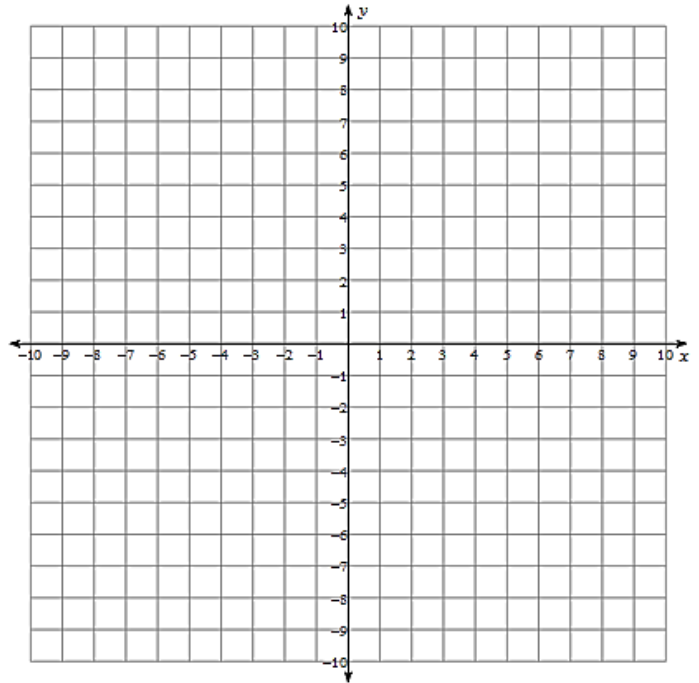
2)  $7x + y = -2$       (-30, -28)



3)  $x + 2y \leq 10$  (4,1)



4)  $9x + 5y > 20$  (0,4)

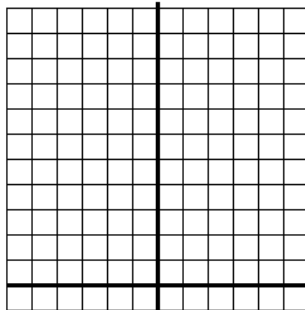


Use the following exponential functions to create a table and graph, find the y-intercept and end behavior, then find the asymptote. Decide if the given point is a solution.

5)  $f(x) = 4\left(\frac{1}{2}\right)^x + 6$

(4,32)

x	f(x)
-2	
-1	
0	
1	
2	



y-intercept: ( , )

As  $x \rightarrow \infty$   $y \rightarrow$  \_\_\_\_\_.

As  $x \rightarrow -\infty$   $y \rightarrow$  \_\_\_\_\_.

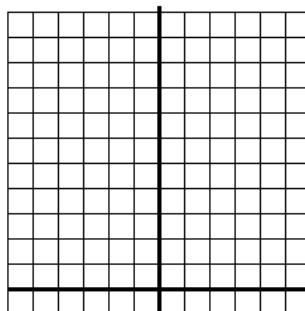
Increasing or decreasing?

Asymptote:

6)  $y = 2(3)^x - 1$

(4,162)

x	f(x)
-2	
-1	
0	
1	
2	



y-intercept: ( , )

As  $x \rightarrow \infty$   $y \rightarrow$  \_\_\_\_\_.

As  $x \rightarrow -\infty$   $y \rightarrow$  \_\_\_\_\_.

Increasing or decreasing?

Asymptote: