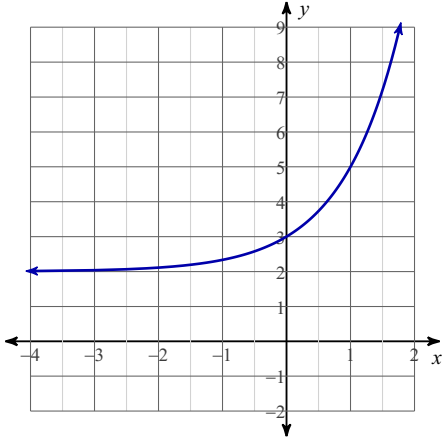
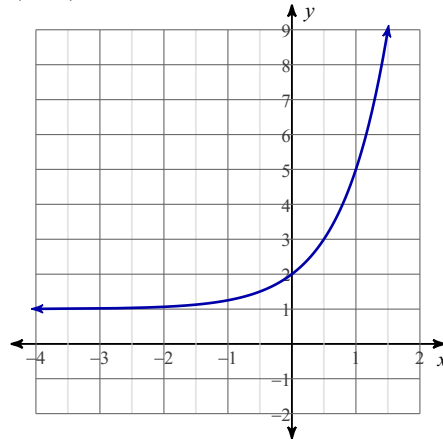


SM3 HW #1-5 (Exponential Function)

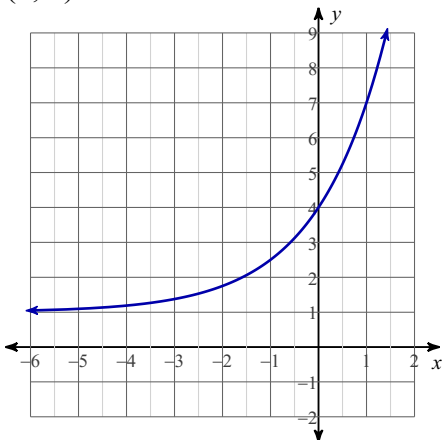
- 1) Write the equation for the graph. The graph passes through the ordered pairs (0, 3) and (1, 5). Start the with transformation equation: $y = ab^x + k$ and SHOW ALL STEPS you used to obtain the equation.



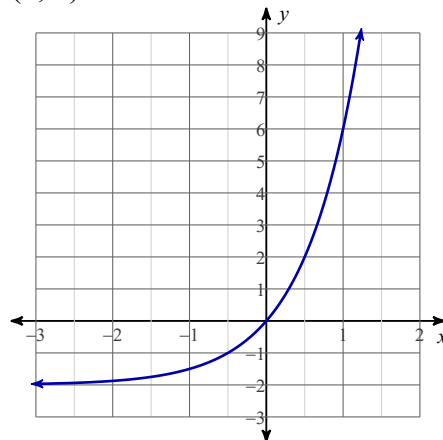
- 2) Write the equation for the graph. The graph passes through the ordered pairs (0, 2) and (1, 5)



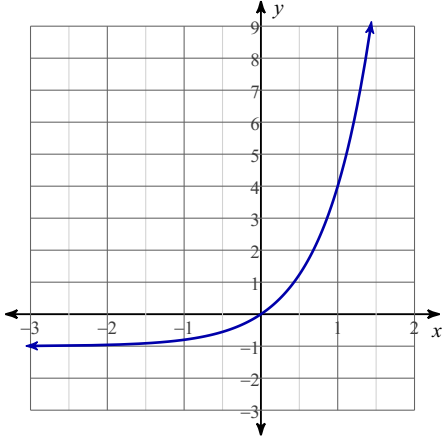
- 3) Write the equation for the graph. The graph passes through the ordered pairs (0, 4) and (1, 7)



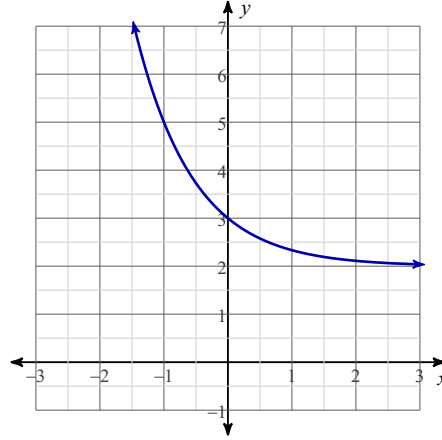
- 4) Write the equation for the graph. The graph passes through the ordered pairs (0, 0) and (1, 6)



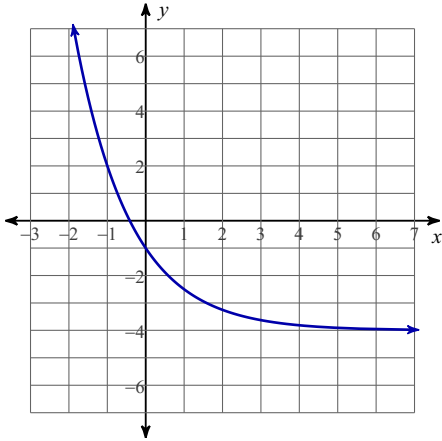
- 5) Write the equation for the graph. The graph passes through the ordered pairs $(0, 0)$ and $(1, 4)$



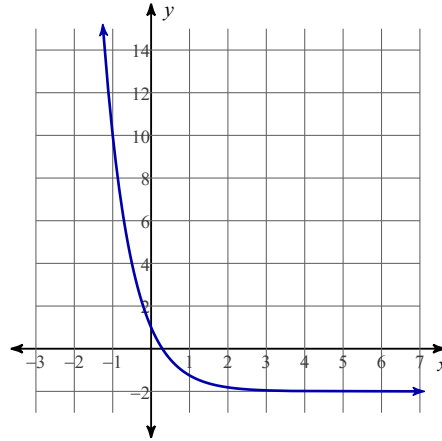
- 6) Write the equation for the graph. The graph passes through the ordered pairs $(0, 3)$ and $(-1, 5)$



- 7) Write the equation for the graph. The graph passes through the ordered pairs $(0, -1)$ and $(-1, 2)$



- 8) Write the equation for the graph. The graph passes through the ordered pairs $(0, 1)$ and $(-1, 10)$



9) a) Describe the transformation of the parent

function $y = \left(\frac{1}{4}\right)^x$ given by the equation

$$g(x) = 2 \cdot \left(\frac{1}{4}\right)^x + 3$$

b) what is the horizontal asymptote?

c) what is the domain?

d) what is the range?

e) What is the "growth factor"?

f) what is the y-intercept?

g) is the function "growth" or "decay"?

10) a) Describe the transformation of the

parent function $y = 2^x$ given by the equation

$$g(x) = 3 \cdot 2^x - 1$$

b) what is the horizontal asymptote?

c) what is the domain?

d) what is the range?

e) What is the growth factor?

f) what is the y-intercept?

g) is the function "growth" or "decay"?