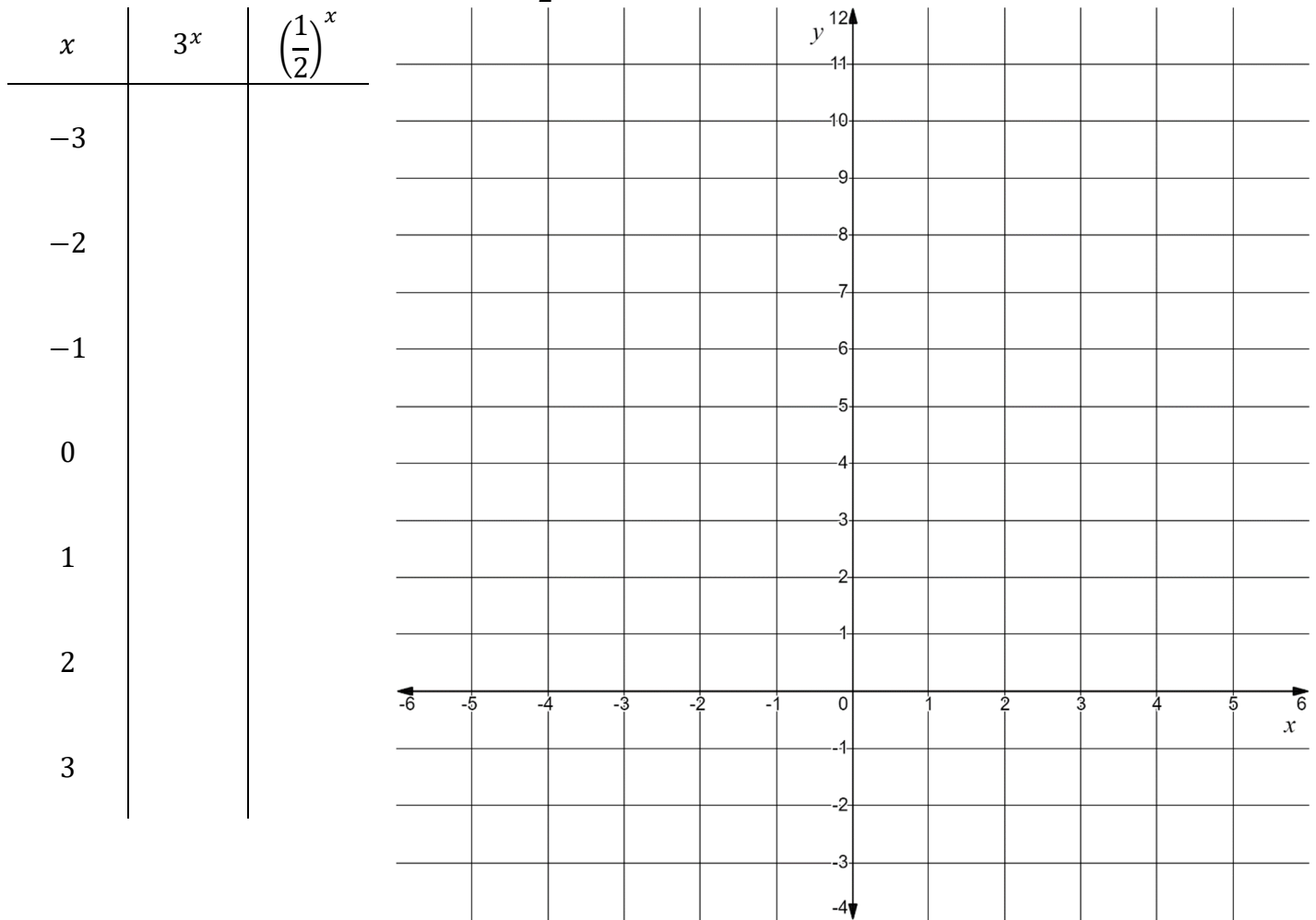Name: _____   Date: _____

Learning Goal 7.1	Applying one or more transformations to an exponential function, including translations, stretches and reflections.

Example Graph by hand $y = 3^x$ and $y = \left(\frac{1}{2}\right)^x$ on the same axes, using a table of values.

x	3^x	$\left(\frac{1}{2}\right)^x$
-3		
-2		
-1		
0		
1		
2		
3		

What happens to the graph of $y = 3^x$ as x becomes more and more negative, without bound?

What happens to the graph of $y = \left(\frac{1}{2}\right)^x$ as x becomes more and more positive, without bound?

Assignment   p. 342 # 1 – 5, 7, 8, 15, C1, C2   Quiz Next Day!

Compare	Graph of $y = 3^x$	Graph of $\left(1/2\right)^x$	Graph of $y = b^x$
Vertical intercept			
Horizontal intercept			
Domain & Range			
Asymptote			

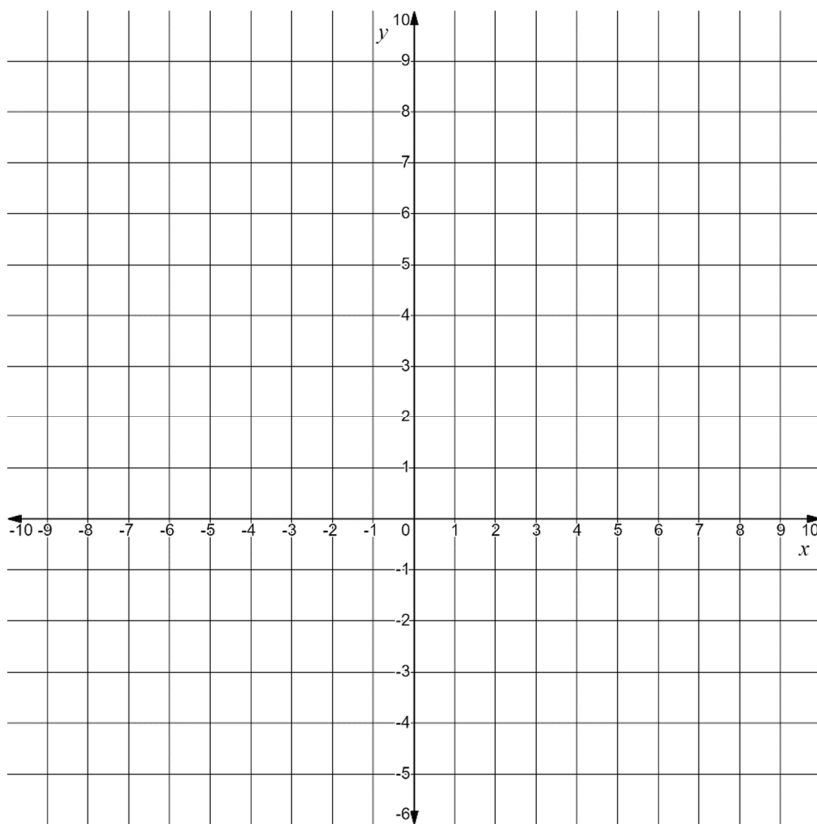If $b > 1$,   If $0 < b < 1$

Example Graph the function $y = 2^x$.

a. Graph $y = 2^{(x-3)}$ b. Graph $y = 2^x - 4$ c. Identify the following features of the transformed graphs.

	$y = 2^{(x-3)}$	$y = 2^x - 4$
Asymptote		
Domain		
Range		
$x -$ Intercept		
$y -$ Intercept		