2-4 Graphing Exponentials

I can graph exponential functions given an equation
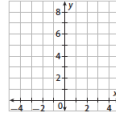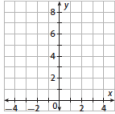
I can identify key features from an equation or a graph

Complete the input-output table for each of the parent exponential functions below.

x	$f(x) = 2^x$
−3	
−2	
−1	
0	
1	
2	
3	

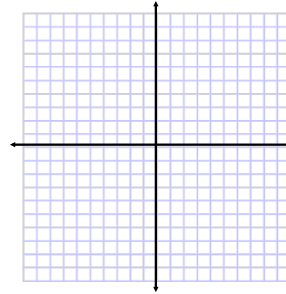| x	$p(x) = 10^x$
−3	
−2	
−1	
0	
1	
2	
3	

Graph the parent functions $f(x) = 2^x$ and $p(x) = 10^x$ by plotting points.
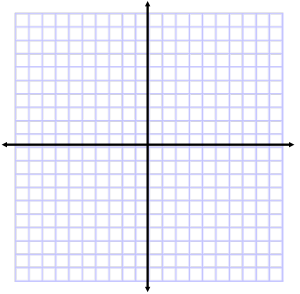

--Task--

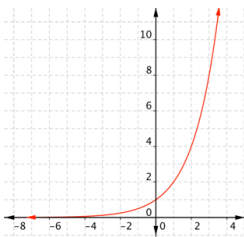Graph each function and state the domain, range, y-intercept, and asymptote for each.

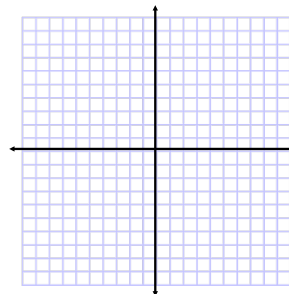$g(x) = 4(2^{x+2}) - 6$

$q(x) = -\frac{3}{5}(10^{x+2}) + 3$

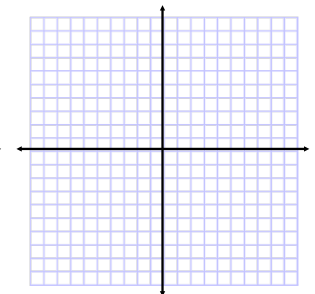State the domain, range, y-intercept, asymptote, increasing, decreasing, and end behavior.

Domain:

Range:

Y-intercept:

Horizontal Asymptote:

Increasing:

Decreasing:

End Behavior:

Graph each function and state the domain, range, y-intercept, and asymptote for each.

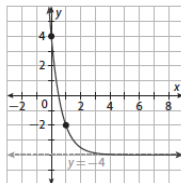$g(x) = 3\left(\frac{1}{2}\right)^{x-2} - 2$

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

State the domain, range, y-intercept, asymptote, increasing, decreasing, and end behavior.

Domain:

Range:

Y-intercept:

Horizontal Asymptote:

Increasing:

Decreasing:

End Behavior: