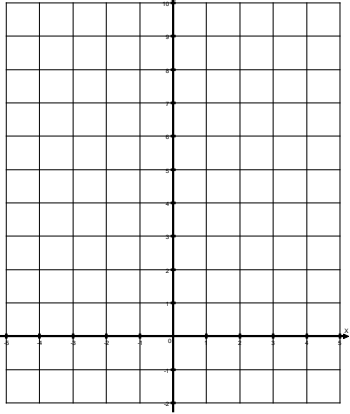
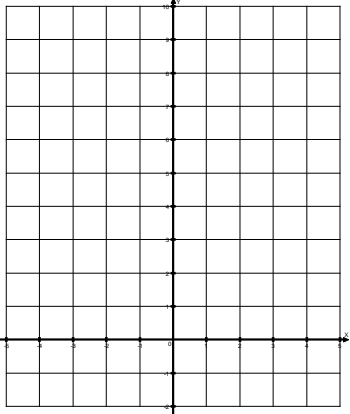


Day 4 – Characteristics Practice

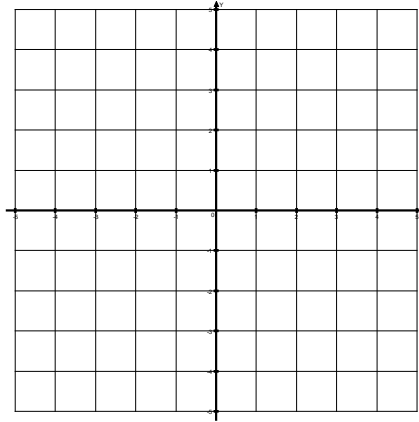
Name: _____

For each of the following problems, create a graph using the given table of values. Be sure to place the horizontal asymptote at the appropriate location. Once you are finished with your graph, complete the characteristics of the function accordingly.

<p>1. $f(x) = 3^x$</p>	<table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>-2</td> <td></td> </tr> <tr> <td>-1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> </tbody> </table>	x	y	-2		-1		0		1		2			<p>Domain: _____ Range: _____</p> <p>X-intercept: _____ y-intercept: _____</p> <p>Interval of Increase: _____ Interval of Decrease: _____</p> <p>Maximum(s): _____ Minimum(s): _____</p> <p>Asymptote: _____</p> <p>End- Behavior: as $x \rightarrow -\infty$, $f(x) \rightarrow$ _____ as $x \rightarrow \infty$, $f(x) \rightarrow$ _____</p> <p>Find the average rate of change from $x=0$ to $x=2$: _____</p>
x	y														
-2															
-1															
0															
1															
2															
<p>2. $g(x) = \left(\frac{1}{3}\right)^x$</p>	<table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>-2</td> <td></td> </tr> <tr> <td>-1</td> <td></td> </tr> <tr> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> </tbody> </table>	x	y	-2		-1		0		1		2			<p>Domain: _____ Range: _____</p> <p>X-intercept: _____ y-intercept: _____</p> <p>Interval of Increase: _____ Interval of Decrease: _____</p> <p>Maximum(s): _____ Minimum(s): _____</p> <p>Asymptote: _____</p> <p>End- Behavior: as $x \rightarrow -\infty$, $f(x) \rightarrow$ _____ as $x \rightarrow \infty$, $f(x) \rightarrow$ _____</p> <p>Find the average rate of change from $x=-2$ to $x=0$: _____</p>
x	y														
-2															
-1															
0															
1															
2															

3. $h(x) = 2^x - 4$

x	y
-2	
-1	
0	
1	
2	



Domain: _____ Range: _____

X-intercept: _____ y-intercept: _____

Interval of Increase: _____ Interval of Decrease: _____

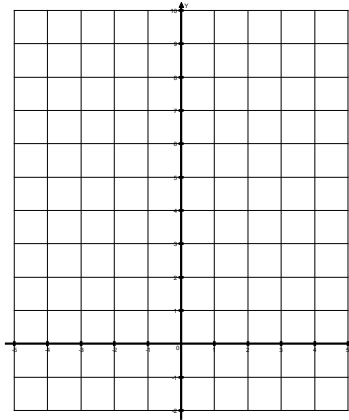
Maximum(s): _____ Minimum(s): _____

Asymptote: _____

End- Behavior: as $x \rightarrow -\infty$, $f(x) \rightarrow$ _____as $x \rightarrow \infty$, $f(x) \rightarrow$ _____Find the average rate of change from $x=0$ to $x=2$: _____

4. $p(x) = 2^{x+4}$

x	y
-5	
-4	
-3	
-2	
-1	
0	
1	
2	



Domain: _____ Range: _____

X-intercept: _____ y-intercept: _____

Interval of Increase: _____ Interval of Decrease: _____

Maximum(s): _____ Minimum(s): _____

Asymptote: _____

End- Behavior: as $x \rightarrow -\infty$, $f(x) \rightarrow$ _____as $x \rightarrow \infty$, $f(x) \rightarrow$ _____Find the average rate of change from $x=-4$ to $x=-1$: _____