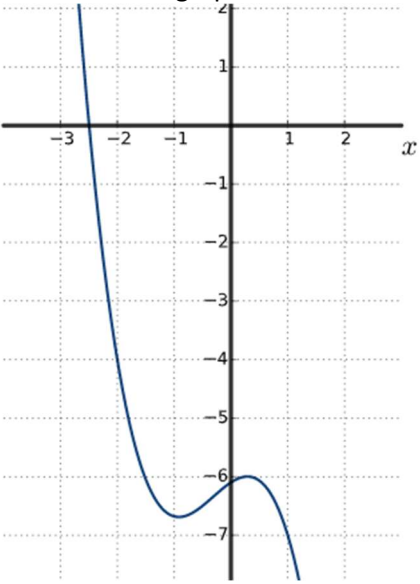
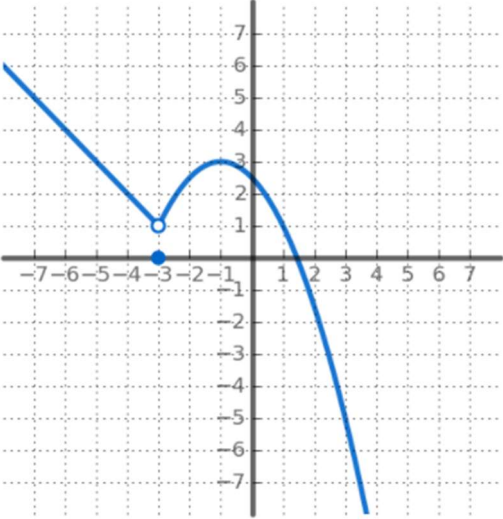


Instructions: Find someone in the classroom who knows how to solve a problem below and have them explain it to you. Once they have explained it so that you understand it, have them sign their name to the problem. Then find someone else who can explain another problem. Continue this process until all problems have been completed.

<p>1) Find the derivative of $f(x) = 3x^2 - 5^x + 7$</p>	<p>2) Find the derivative of $g(x) = \ln(x^2 - 3)$</p>	<p>3) Find $\lim_{x \rightarrow 2} f(x)$ where the values of $f(x)$ are given in this table:</p> <table border="1" data-bbox="1220 350 1969 423"> <tbody> <tr> <td>x</td> <td>1.8</td> <td>1.9</td> <td>1.99</td> <td>1.999</td> <td>2</td> <td>2.001</td> <td>2.01</td> <td>2.1</td> <td>2.2</td> </tr> <tr> <td>$f(x)$</td> <td>17</td> <td>5</td> <td>3.4</td> <td>3.002</td> <td>9</td> <td>3.002</td> <td>3.4</td> <td>5</td> <td>17</td> </tr> </tbody> </table>	x	1.8	1.9	1.99	1.999	2	2.001	2.01	2.1	2.2	$f(x)$	17	5	3.4	3.002	9	3.002	3.4	5	17												
x	1.8	1.9	1.99	1.999	2	2.001	2.01	2.1	2.2																									
$f(x)$	17	5	3.4	3.002	9	3.002	3.4	5	17																									
<p>4) Find the average rate of change on the interval $[-2, 1]$ for the function graphed below</p> 	<p>5) Find $h'(3)$ if $h(x) = f(g(x))$</p> <table border="1" data-bbox="623 570 1144 867"> <thead> <tr> <th>x</th> <th>$f'(x)$</th> <th>$g(x)$</th> <th>$g'(x)$</th> </tr> </thead> <tbody> <tr> <td>-1</td> <td>-2</td> <td>2</td> <td>5</td> </tr> <tr> <td>0</td> <td>-3</td> <td>0</td> <td>3</td> </tr> <tr> <td>1</td> <td>-4</td> <td>-2</td> <td>-1</td> </tr> <tr> <td>2</td> <td>-5</td> <td>1</td> <td>2</td> </tr> <tr> <td>3</td> <td>-6</td> <td>2</td> <td>4</td> </tr> <tr> <td>4</td> <td>-7</td> <td>5</td> <td>6</td> </tr> <tr> <td>5</td> <td>-8</td> <td>0</td> <td>8</td> </tr> </tbody> </table>	x	$f'(x)$	$g(x)$	$g'(x)$	-1	-2	2	5	0	-3	0	3	1	-4	-2	-1	2	-5	1	2	3	-6	2	4	4	-7	5	6	5	-8	0	8	<p>6) Explain why the function graphed below is or is not continuous (use the definition of continuity and your intuition).</p> 
x	$f'(x)$	$g(x)$	$g'(x)$																															
-1	-2	2	5																															
0	-3	0	3																															
1	-4	-2	-1																															
2	-5	1	2																															
3	-6	2	4																															
4	-7	5	6																															
5	-8	0	8																															
<p>7) Write $\log_5 \left(\frac{(x-2)^3}{2x+8} \right)$ as a sum or difference of logarithms (with no powers)</p>	<p>8) Find the derivative of $f(x) = x^4 7^x$</p>	<p>9) Find the slope of the secant line to $h(x) = 3x^2$ through the points where $x = 1$ and $x = 2$</p>																																