Template for Lab #7 – *Linking up with the Chain Rule*

2a.

Function in the form $f(x) = (g(x))^n$ (Think: what is the **Derivative Rule (DR)** for this function?) $f'(x) \rightarrow$ n[g(x)]^n-1 Math 8	Value of $f'(-1)$ determined with the calculator	Value of the **Derivative Rule (DR)** at $x = -1$ … in this case … $n \cdot (g(-1))^{n-1}$ Evaluate f'(-1) using rule in column 1	***Correction factor***, or what is needed to be multiplied to the **Derivative Rule (DR)** at $x = -1$ to equal the value of $f'(-1)$ Compare Column 2 to 3. Are they the same? Find a correction factor.
$(x^2 - 3x)^2 \rightarrow$			
$(x^2 - 3x)^3 \rightarrow$			
$\sqrt{x^2 - 3x} \rightarrow$			

3a.

Function in the form $f(x) = \sin(g(x))$ (Think: what is the **Derivative Rule (DR)** for this function?) $f'(x) \rightarrow$ cos(g(x))	Value of $f'(3)$ determined with the calculator Math 8 *radian mode	Value of the **Derivative Rule (DR)** at $x = 3$ … in this case … $\cos(g(3))$ Evaluate f'(3) in column 1	***Correction factor***, or what is needed to be multiplied to the **Derivative Rule (DR)** at $x = 3$ to equal the value of $f'(3)$	Value of $g'(3)$ (Think: what do you notice?) g'(x) = ? g'(3) = ?
$\sin(2x) \rightarrow$				
$\sin\left(\frac{1}{2}x + 3\right) \rightarrow$				
$\sin(x^2) \rightarrow$				