**Derivative Rules:**

**Definition**

**Interpretation**

**Summation Rule:**

**Product Rule:**

**Quotient Rule:**

**Chain Rule:**

**Special Derivatives**

**Derivative Worksheet with Chain Rule**

1. 
2. 
3. 
4. 
5. $f\left(x\right)=tan⁡(x^{3})$
6. $f\left(x\right)=\sin(\left(\cos(\left(x\right))\right))cos⁡(\sin(\left(x\right)))$
7. 
8. 
9. 
10. 
11. 
12. 
13. , find 

1. $f\left(x\right)=x sin⁡(x)$, find $f^{'''}(x)$

1. $f\left(x\right)=cos⁡(x^{2})$, find $f^{'''}(x)$

