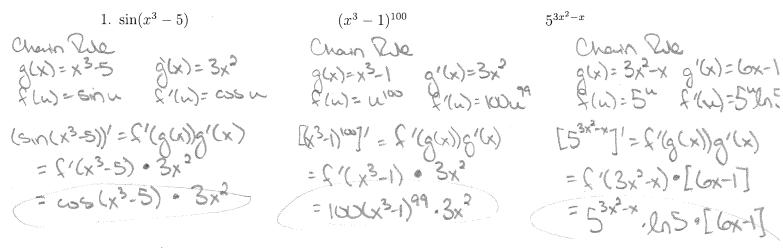
## More Differentiation Practice

For each of the functions below find their respective derivatives.



2. Recall that we can use the product, quotient, and chain rule together! The trick is to use the notation to *guide* you. Find the derivative of  $\sin^5(x)\sqrt{x^3-5}$ .

$$[3in^{5}(x)]\sqrt{x^{3}-5}]' = 5in^{5}(x)[\sqrt{x^{3}-5}]' - [3in^{5}(x)]'/\sqrt{x^{3}-5}]' = [4] product role)$$

$$(5in^{5}(x))\frac{1}{5}(x^{3}-5)^{5}(3x^{2}-5)n^{6}(x)cosx(x^{3}-5)$$

$$(4)[x^{3}-5]' = [(x^{3}-5)^{5}]' = 2'[g(x)]g'(x) = 2'(x^{3}-5)(3x^{3})[s:n^{5}x]' = [(sinx)^{5}]' = 5sin^{6}x \cdot cosx(x^{3}-5)(x^{3$$

3. The chain rule can also be used in conjunction with itself. That is, we can use the chain rule to work on a derivative, but when trying to find the "inside function", we may need to use the chain rule again. Find the derivative of  $\sin^2(x^3)$ .

may need to use the chain rule 
$$again$$
. Find the derivative of  $\sin^2(x^3)$ .

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