

Homework: Product and Quotient Rules - Key

In Problems 1-3, Use the product rule to find the derivative

1. $f(x) = 144x + 7$	2. $f(x) = 3x^2 - 2x + 2$
3. $f(x) = 9x^2 + 14x - 20$	

In Problems 4-5, find the quotient rule to find the derivative

4. $f(x) = \frac{10x^2 + 5x + 2}{(4x + 1)^2}$	5. $f(x) = \frac{5x^2 - 4x - 30}{(5x - 2)^2}$
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In Problems 6-8, find the derivative

6. $f(x) = \frac{2}{5}x - \frac{7}{5}$	7. $f(x) = \frac{-32}{5x^5}$
8. $f(x) = \frac{1}{4}$	

In Problems 9-11, find the derivative

9. $f(x) = \frac{9}{(x + 5)^2}$	10. $h(x) = 18x - 6$
11. $f(x) = \frac{5x^2 - 14x - 2}{3x^{4/3}}$	

In Problems 12-13, find the equation of the tangent line passing through the given point

12. $y = -5x - 1$	13. $y = \frac{3}{25}x - \frac{11}{25}$
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In Problems 14, Find the point(s), if any, at which the graph of f has a horizontal tangent line

14. $(0,0), (6,12)$	
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