DERIVATIVES - QUOTIENT RULE WORKSHEET #6

Rule: if $f(x) = \dfrac{g(x)}{h(x)}$ then $f'(x) = \dfrac{g'(x)h(x) - h'(x)g(x)}{[h(x)]^2}$

1. $f(x) = \dfrac{3x^2 - x + 2}{4x^2 + 5}$

2. $f(x) = \dfrac{(4x - 5)}{(3x + 2)}$

3. $f(x) = \dfrac{(8 - x + 3x^2)}{(2 - 9x)}$

4. $f(x) = \dfrac{2x}{(w^3 - 7)}$

5. $f(x) = \dfrac{(8x^2 - 5x)}{(13x^2 + 4)}$

6. $f(x) = \dfrac{(x^3 - 1)}{(x^3 + 1)}$

7. $f(x) = \dfrac{(8x + 5)}{(x^2 - 2x + 3)}$

8. $f(x) = \dfrac{\dfrac{3}{5x} - 1}{\dfrac{2}{x^2 + 7}}$

9. $f(x) = \dfrac{e^{-x^2}}{x}$

10. $f(x) = \dfrac{e^{3x}}{1 + e^x}$

11. $f(x) = \dfrac{\ln x}{1 + x^2}$

12. $f(x) = \dfrac{1 - \ln x}{1 + \ln x}$

13. $f(x) = \dfrac{(1 + \ln x)^4}{x}$

14. $f(x) = \dfrac{5^x}{2^x}$

15. $f(x) = \dfrac{\log_6(2x)}{\ln x}$

16. $f(x) = \dfrac{3^{(5x-1)}}{e^{4x}}$