PRACTICE QUIZ 10

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Time: 15 min
Time to beat: 5 min

Problem 1. Find dy/dx for $y = \frac{1}{x} + \frac{3}{x^2} + \frac{2}{x^3}$.

Problem 2. Find dy/dx for for $y = \frac{2}{\sqrt{x}} + \frac{6}{\sqrt[3]{x}} - \frac{2}{\sqrt{x^3}}$.

Problem 3. Find the derivative of $f(x) = \frac{2}{x^{1/2}} + \frac{6}{x^{1/3}} - \frac{2}{x^{3/2}} - \frac{4}{x^{3/4}}$.

Problem 4. Without using chain rule, find the derivative of $f(x) = (2x+1)^5$. (Hint: the product rule for more than one function is $(f_1 f_2 \dots f_n)' = f_1' f_2 \dots f_n + f_1 f_2' \dots f_n + \dots\dots + f_1 f_2 \dots f_n'$).

Problem 5. Without using the chain rule, find the derivative of $f(x) = e^{5x}$.