MATH 2301 GW11 Part I: Rewriting Functions in Different Forms

LAST NAMES			

FIRST NAMES			

Simplified Form Involving Radicals and/or Positive Exponents	=	Positive Exponent Form with Separate Constants	=	Power Function Form (Sum of terms of form *constant* × *power function)* $ax^p + bx^q$
$f(x) = \frac{5}{x^2} + \frac{9}{x}$	=	$5\left(\frac{1}{x^2}\right) + 9\left(\frac{1}{x}\right)$	=	$5x^{-2} + 9x^{-1}$
$f(x) = \frac{1.2}{\sqrt{x}} - \frac{0.6}{\sqrt[3]{x^2}}$	=	$1.2\left(\frac{1}{x^{1/2}}\right) - 0.6\left(\frac{1}{x^{2/3}}\right)$	=	$1.2x^{-1/2} - 0.6x^{-2/3}$
$f(x) = \frac{5}{\sqrt[3]{x}} - \frac{6}{x^{1/2}}$	=		=	
	=		=	$-\left(\frac{10}{7}\right)x^{-3} + \left(\frac{9}{13}\right)x^{-2}$
$f(x) = \frac{7\sqrt[3]{x}}{5} + \frac{3}{11x^{2/5}}$	=		=	
	=		=	$\left(\frac{7}{15}\right)x^{-2/3} - \left(\frac{6}{55}\right)x^{-7/5}$

GW 11 Part II: Rewrite Function, then Find Derivative Using Derivative Rules

$$f(x) = \frac{7\sqrt[3]{x}}{5} + \frac{3}{11x^{2/5}}$$

(A) Rewrite $f(x)$ in *power function form*.
That is, rewrite it as a sum of terms of the form *constant* × *power function*.
That is, rewrite it in the form $f(x) = ax^p + bx^q$.
Hint: Do this in two steps, as was done in Part I

(B) Find $f'(x)$.

- Use the Derivative Rules. (That is, DO NOT use the Definition of the Derivative.)
- Show all details clearly and use correct notation.
- Simplify your final answer and rewrite it in *positive exponent form*. That is, rewrite it so that it is simplified and does not have any negative exponents.