p.133-134: Theorem 2.10; p.135: Examples 2 & 3

THEOREM 2.10 The Chain Rule

If y = f(u) is a differentiable function of u and u = g(x) is a differentiable function of x, then y = f(g(x)) is a differentiable function of x and

$$\bigcup_{x} \frac{dy}{dx} = \frac{dy}{du} \cdot \frac{du}{dx} \bigvee_{x} \int_{0}^{1} \frac{dy}{dx} dx$$

p.135: Theorem 2.11; p.136 - 137: Examples 4 - 9

THEOREM 2.11 The General Power Rule

If $y = [u(x)]^n$, where u is a differentiable function of x and n is a rational

number, then $\frac{d}{dx}[u^n] = nu^{n-1}u'$.

p.140: In Exercises 9-34, find the derivative of the function.

10. $y = 5(2 - x^3)^4$ $y = 5 \cdot y^4 \Rightarrow y^2 = 5 \cdot y^3 \cdot y^3 \cdot (-3x^2) = -3x^2 \cdot y^3 \cdot (-3x^2) = -6x^2 \cdot y^3 \cdot (-5x^2) = -6x^2 \cdot y^3 \cdot$

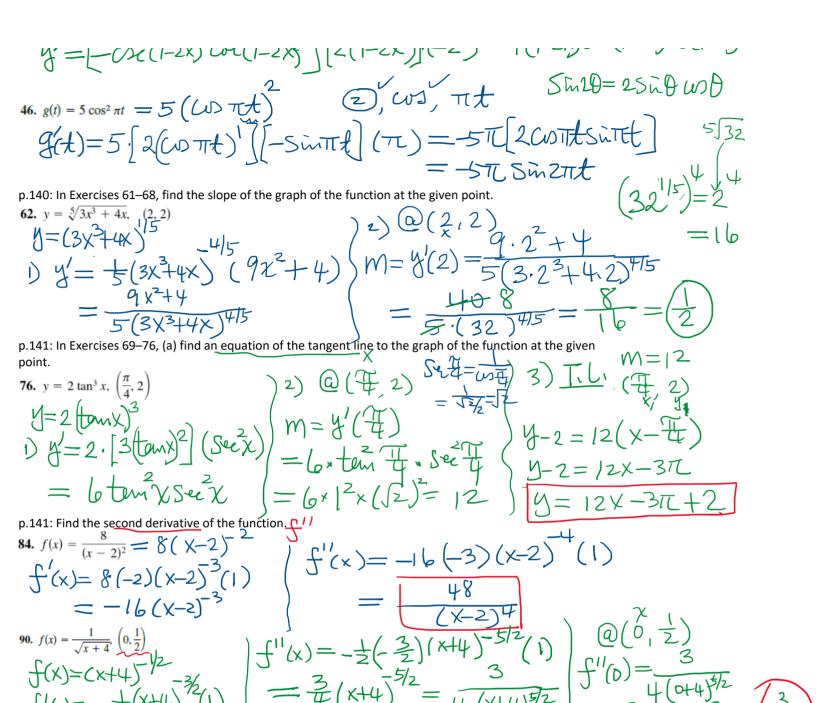
p.138 - 139: Trigonometric Functions and the Chain Rule; Examples 10 - 13

p.140: In Exercises 35-54, find the derivative of the trigonometric function.

36.
$$y = \sin(\pi x)$$
 \longrightarrow $y' = (COTTK) \pi = \pi COTTX$

38.
$$h(x) = \sec(6x) \longrightarrow W(x) = (Sacbxtembx)(b) = (gSacbxtembx)$$

40.
$$y = csc(1 - 2x)^2$$
 esc, ②, $(1 - 2x)^4$
 $y' = [-csc(1-2x)^2 cot(1-2x)^2][2(1-2x)](-2) = 4(1-2x)csc(1-2x)^2 ot(1-2x)^2$
 $5m10 = 25m0 m0$



p.139: Summary of Differentiation Rules