

## SECTION 3-6: THE CHAIN RULE

1. Recall Two Versions of the Chain Rule

2. Understanding what the “formulas” in the book are trying to communicate:

3. Find the derivatives.

(a)  $g(\theta) = \sqrt[5]{\sin(\frac{\theta}{\pi})}$

(b)  $f(x) = (\sec(3x) + \csc(2x))^5$

(c)  $g(x) = \frac{\cos(x^2+1)}{x^3+1}$

(d)  $h(x) = (2x - 1)^3(2x + 1)^5$

4. Find all  $x$ -values where the tangent to  $f(x) = \frac{5}{(8x-x^2)^3}$  is horizontal.

5. Find all  $x$ -values where the tangent to  $f(x) = (x^2 - 4)^3$  is parallel to  $y + 6x = 8$ .