

## The Chain Rule

1. Find the derivative of the function  
(similar to p.161 #9-38)

$$y = 5(x^2 - 3)^4$$

2. Find the derivative of the function  
(similar to p.161 #9-38)

$$y = \sqrt{x^2 - 4x + 9}$$

3. Find the derivative of the function  
(similar to p.161 #9-38)

$$y = \sqrt[3]{\frac{1}{x^2 - 5}}$$

4. Find the derivative of the function  
(similar to p.161 #9-38)

$$y = \frac{2}{\sqrt{7x - 2}}$$

5. Find the derivative of the function  
(similar to p.161 #9-38)

$$g(x) = \left( \frac{7x - 1}{3x + 2} \right)^4$$

6. Find the derivative of the function  
(similar to p.162 #57-106)

$$g(x) = \sin^3(7x)$$

7. Find the derivative of the function  
(similar to p.162 #57-106)

$$y = \tan \sqrt{x} + \sqrt[3]{\sec x}$$

8. Find the derivative of the function  
(similar to p.162 #57-106) NEXT TIME  
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$$h(x) = \ln(3x^2 - 7x + 1)$$

9. Find the derivative of the function  
(similar to p.162 #57-106)

$$h(x) = \ln \sqrt[5]{x^2 + 3}$$

10. Find the derivative of the function  
(similar to p.162 #57-106)

$$h(x) = \ln \sqrt[7]{\frac{3x-1}{x+4}}$$

11. Find the derivative of the function  
(similar to p.162 #57-106)

$$h(x) = \ln \sqrt{1 + 3 \tan^2 x}$$

12. Find the derivative of the function  
(similar to p.162 #131-146)

$$f(x) = 3^{x^2-3x} \tan(3x)$$

13. Find the derivative of the function  
(similar to p.162 #131-146)

$$y = \log_4 \frac{x^2 - 9}{x + 5}$$