

1) Determine the derivative of  $f(x) = (4x + 3)^5$ .

2) Determine the derivative then find the equation of the line tangent to the graph of the following equation at the indicated point.

$$f(x) = \sqrt{9x^2 + 64}; \quad (2, 10)$$

3) Determine the derivative of  $f(x) = \frac{125}{\sqrt[3]{6x^2 + 5x + 7}}$ .

## Answer Key

Testname: WORKSHEET 2.4 CHAIN RULE

$$1) f'(x) = 20(4x + 3)^4$$

$$2) f'(x) = \frac{9x}{\sqrt{9x^2+64}}$$

$$y = \frac{9}{5}x + \frac{32}{5}$$

$$3) f'(x) = \frac{-125(12x + 5)}{3\sqrt{(6x^2 + 5x + 7)^4}}$$