

$$11. (3+5x)^3$$

$$12. (2x^2 - 1)^4$$

9.4

Pg. 588

10, 16, 25

$$10. y = 3x^5 - 5x^3 - 8x + 8$$

$$f'(x) = 15x^4 - 15x^2 - 8$$

$$16. c(x) = 3x^2 - 5; (3, 22)$$

a. derivative = $6x$

$$6(3) = 18$$

b. $x = 18$

$$25. y(x) = \frac{3}{x^5} + \frac{2}{x^4} + 6\sqrt{x}$$

$$= 3 \cdot x^{-5} + 2 \cdot x^{-4} + 6x^{1/2}$$

$$= 3(-5) \cdot x^{-6} + 2(-4) \cdot x^{-5} + 6(1/2) \cdot x^{-1/2 - 1}$$

$$= 15 \cdot x^{-6} + (-8) \cdot x^{-5} + (-1)$$

$$g'(x) = \frac{-15}{x^6} - \frac{8}{x^5} + \frac{2}{\sqrt{x}}$$

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