

10. Find  $\lim_{x \rightarrow 0} \frac{x}{x-3}$  c

11. Use the difference quotient for:  $f(x) = 3x^2 - 4$  Set up the problem do **not** solve.

12. Find an equation of the tangent line to the graph of  $y = 4x - 2x^2$ ; at the point (1, 2)

13. Find the points on the graph of  $y = x - \frac{1}{2}x^2$  at which the tangent line is horizontal.

Differentiate.

14.  $y = \frac{3}{4}x^4 - 4x^3 - x + 15$

$$y = 15$$

15.  $f(x) = \frac{x}{x-3}$

$$= -3$$

16.  $h(x) = (2x - 3)^2(x - 5)^4$

$$= 10$$