

Name: _____

Calculus

Answer to Your Try Problems for Chapter 2

$$2c) \quad f(x) = x^2 \quad f(x+h) = (x+h)^2 = x^2 + 2xh + h^2$$

$$f'(x) = \lim_{h \rightarrow 0} \frac{x^2 + 2xh + h^2 - x^2}{h} = 2x + h \rightarrow 2x \quad .$$

$$2d) \quad f'(x) = 7x^6$$

$$2e) \quad f'(x) = \sec^2 x$$

$$2f) \quad f'(x) = 5e^{5x} \quad .$$

2g) Horizontal at $(-5, 100)$ and $(1, -8)$.

2h) Concave down $-\infty < x < -2$; concave up $-2 < x < \infty$.

2i) & 2j) Individual results.