

NOTE CHECK \rightarrow 1.5

Ex 1: FIND EQ. OF THE TANGENT LINE TO $y = x^2$ @ $(1, 1)$

$$f(x) =$$

$$x_0 =$$

$$m = \lim_{h \rightarrow 0}$$

$$f(1+h) =$$

$$f(1) =$$

$$m = 2 \quad (1, 1)$$

$$y - y_1 = m(x - x_1) \rightarrow$$

$$\rightarrow y =$$

Ex 2: EQ. OF TAN. LINE TO $y = \frac{3}{x}$ @ $(3, 1)$

$$f(3+h) =$$

$$f(3) =$$

$$\lim_{h \rightarrow 0}$$

Ex 2 (CONT')

$$y - y_1 = m(x - x_1)$$

$$y =$$

Ex 3: FIND SLOPE ... $y = \sqrt{x}$ AT ANY POINT

$$\begin{aligned} f(x+h) &= \\ f(x) &= \end{aligned}$$

$$m = \lim_{h \rightarrow 0} \underline{\hspace{2cm}}$$

$$m = \underline{\hspace{2cm}}$$

Ex 4: $s(t) = 500 - 16t^2$ INST. VEL. @ 5 SEC.

$$V_{\text{INST}} = \lim_{h \rightarrow 0} \underline{\hspace{2cm}}$$

$$\begin{aligned} s(5+h) &= \\ s(5) &= \end{aligned}$$

Ex 4 (Cont')

$$= \lim_{h \rightarrow 0}$$

= ft/sec

Ex 5: $y = 3x - 1$

R.O.C.:

$y = -x + 1$

R.O.C.: