

CALCULUS II  
FIRST PARTIAL

QUIZ 1A

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60 + 2  
62

Answer the following problems with complete procedure.

1. Find the approximate value of  $(3.04)^3$  (20 pts)

$$\frac{(3.04)^3}{x^3}$$

$$3x^2$$

$$f(x) + 3(3)^2(0.04) = \underline{10.8}$$

$$\underline{(3.04)^2 \approx 10.8}$$

10

2. Given the equation  $f(x) = x^2 - 2x + 3$  find the line tangent to the curve at  $x = a = 0$ . (20 pts)

$$f'(x) = 2x - 2$$

$$m = 2x - 2$$

$$y = 3$$

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

$$y = (2x - 2)(x - 0) + 3$$

$$y = 2x + 1$$

10

3. The edge of a cube was found to be 20 cm, with a possible error in measurement of 0.1 cm. Estimate the maximum possible error in computing the volume of the cube (20 pts)

$$V = l^3$$

$$dV = 3l^2$$

$$3(20)^2(0.1) = \underline{120 \text{ cm}^2}$$

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