

Activity 1.1: Getting started on differentials

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Remember the following

Equation of a line in point-slope form: $y - y_1 = m(x - x_1)$

Equation of the tangent line: $f(x) = f'(a)[x - x_1] + f(a)$

Solve the following

1. Given the equation $f(x) = x^2 - 2x + 3$ find:

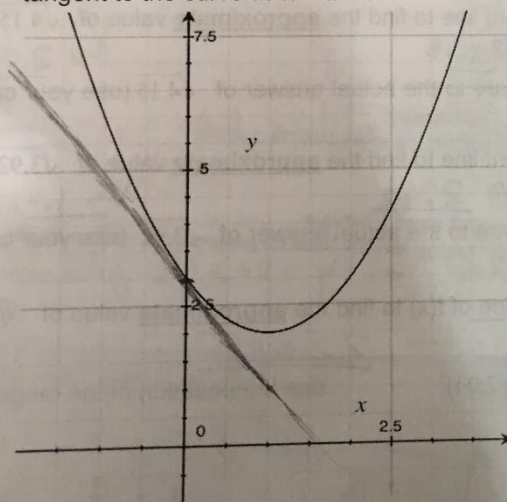
a) $f(0) = \underline{3}$

b) $f'(x) = \underline{2x - 2}$

c) $f'(0) = \underline{-2}$

d) Give the equation of the line tangent to the curve at $x = a = 0$ $f(x) = \underline{-2x + 3}$

e) The following graph belongs to $f(x) = x^2 - 2x + 3$, graph the equation of the line tangent to the curve at $x = a = 0$



f) Use the given equation $f(x) = x^2 - 2x + 3$ to find the value of $f(0.5) = \underline{2.25}$

By: Arq. Monica M. Paniagua $\frac{2.5}{2.5}$

It was useful to recover previous knowledge from the last semester and to practice again with derivatives.