

Introductory Calculus ~ Homework Activity 2

Student name: _____ Date Due: _____

All answers must be written on a separate piece of paper

Question 1

The function

$$f(x) = x^2 + 3x - 18$$

cuts the y axis at point A and the x axis at points B and C.

Determine the coordinates of A, B and C.

Question 2

The function

$$f(x) = 4x^2 + 5x - 36$$

cuts the y axis at point D and the x axis at points E and F.

Determine the coordinates of D, E and F.

Question 3

The line

$$y = 5x + 2$$

intersects the curve

$$f(x) = 4x^2 + 1x - 4 \text{ at 2 points.}$$

Find the coordinates of these two points of intersection

Declaration

The work I am submitting in this assignment is my own work.

It was not copied from another person.

Student Signature ; _____

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Solutions

$$A = (0 , 18)$$

$$B = (-6 , 0)$$

$$C = (3 , 0)$$

$$(x + 6) (x - 3) = x^2 + 6 x - 3 x -$$

$$= x^2 + 3 x - 18$$

$$D = (0 , 36)$$

$$E = (2.25 , 0) \text{ or } (2 \frac{1}{4} , 0)$$

$$F = (-4 , 0)$$

$$(4 x - 9) (x + 4) = 4 x^2 - 9 x - 16 x -$$

$$= 4 x^2 + 5 x - 36$$

$$4 x^2 + -4 x - 6 = 0$$

$$\frac{-(-4) + \sqrt{10.583}}{8} = 1.8228757$$

$$\frac{-(-4) - \sqrt{10.583}}{8} = -0.822876$$

point 1 x= 1.82288
 y= 11.1144

point : x= -0.82288
 y= -2.11438

18

36