

MATH 1010-3A<sup>1</sup>: QUIZ 4

September 16, 2010

**TO RECEIVE CREDIT FOR YOUR SOLUTION ON PROBLEM 2 YOU MUST SHOW YOUR WORK.**

1. By clearly circling either TRUE or FALSE determine if each of the following statements is valid.

(a) If  $A = \{0, 1, 2, 3\}$  and  $B = \{-2, 0, 2, 4\}$ , the set of pairs  $\{(0,0), (1,0), (0,2), (3,4)\}$  represents a function from  $A$  to  $B$ :

TRUE

 FALSE

(b) The graph of  $y = x + 2$  has 2 as an  $y$ -intercept.

 TRUE

FALSE

(c) The distance between the points  $(-2, -3)$  and  $(3, 2)$  is  $\sqrt{50}$ .

 TRUE

FALSE

(d) The point  $(-2, -10)$  lies in the first quadrant of the  $xy$ -plane.

TRUE

 FALSE

(e) Both 3 and  $-3$  are  $x$ -intercepts of the graph of  $y = x^2 - 1$ .

TRUE

 FALSE

2. Find the equation of the line with slope  $-2$  which passes through the point  $(0, 3)$ . Write your answer in slope-intercept form and circle it clearly. Then sketch its graph.

**Solution.** We are given the slope  $(-2)$ , and also the  $y$ -intercept  $(3)$ . So, in slope-intercept form we have

$$y = -2x + 3.$$

The graph is a line which crosses the  $y$ -axis at 3 and the  $x$ -axis at  $3/2$ .

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<sup>1</sup>Version C is identical to version A except that the order of the problems is switched.

MATH 1010-3B<sup>2</sup>: QUIZ 4

September 16, 2010

**TO RECEIVE CREDIT FOR YOUR SOLUTION ON PROBLEM 1 YOU MUST SHOW YOUR WORK.**

1. Find the equation of the line with slope 2 which passes through the point  $(0, -3)$ . Write your answer in slope-intercept form and circle it clearly. Then sketch its graph.

**Solution.** We are given the slope (2), and also the  $y$ -intercept  $(-3)$ . So, in slope-intercept form we have

$$y = 2x - 3.$$

The graph is a line which crosses the  $y$ -axis at  $-3$  and the  $x$ -axis at  $3/2$ .

2. By clearly circling either TRUE or FALSE determine if each of the following statements is valid.

(a) If  $A = \{0, 1, 2, 3\}$  and  $B = \{-2, 0, 2, 4\}$ , the set of pairs  $\{(0,0), (1,0), (2,0), (3,4)\}$  represents a function from  $A$  to  $B$ :

TRUE

FALSE

(b) The graph of  $y = x + 2$  has 2 as an  $x$ -intercept.

TRUE

FALSE

(c) The distance between the points  $(-2, -3)$  and  $(3, 2)$  is 50.

TRUE

FALSE

(d) The point  $(-2, -10)$  lies in the third quadrant of the  $xy$ -plane.

TRUE

FALSE

(e) Both 3 and  $-3$  are  $x$ -intercepts of the graph of  $y = x^2 - 9$ .

TRUE

FALSE

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<sup>2</sup>Version D is identical to Version A except the order of the problems is switched.