

SID: _____

Name: _____

Instructions. (70 points) Write out the solutions to the following problems in the space provided below. This assignment covers problems from Sections 2.1-2.3 of the text. Work must be shown to receive credit. Solutions will be graded on mathematical accuracy as well as notation. See the written guidelines in the syllabus. When you are finished upload your finished assignment in Gradescope.

- (5^{pts}) **1.** Given the points $(-8, 3)$ and $(2, 11)$.
- (a) (3 pts) Find the distance between the points.

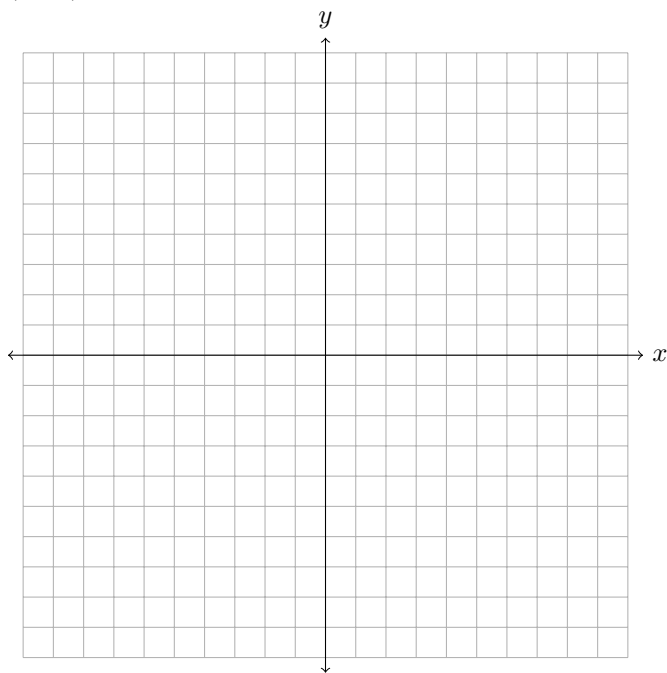
- (b) (2 pts) Find the midpoint of the points.

- (6^{pts}) **2.** Given the equation $6x - 4y = 8$. Fill in the table to complete each ordered pair. Leave answers as integers or simplified fractions.

x	y
0	
	0
-4	
	3
2	
	-5

(b) (2 pts) y -intercept

(c) (3 pts) Sketch the graph and list two other points.

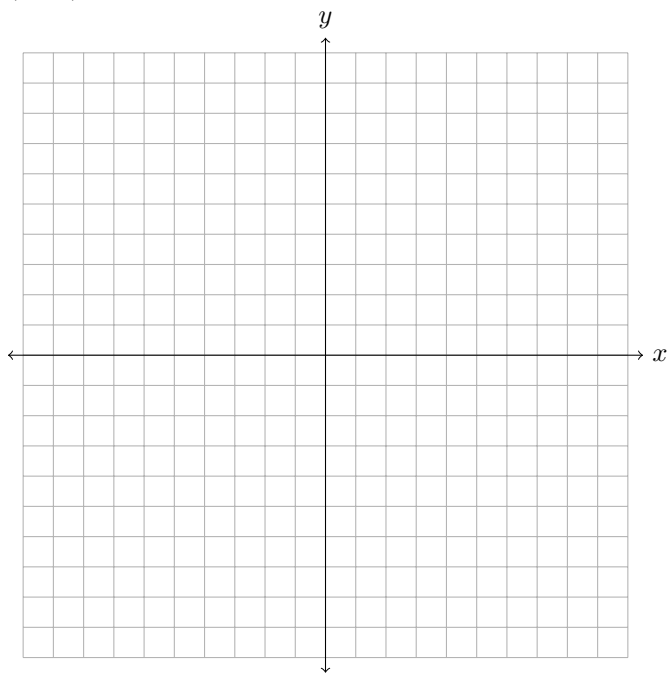


(a) (6 pts) Determine if the given points form a right triangle, an isosceles triangle, or neither.

(b) (3 pts) What is the area of the triangle?

- (7^{pts}) 5. Given the equation $6y = -42$, find the following:
- (a) (2 pts) x -intercept (b) (2 pts) y -intercept

- (c) (3 pts) Sketch the graph and list two other points.

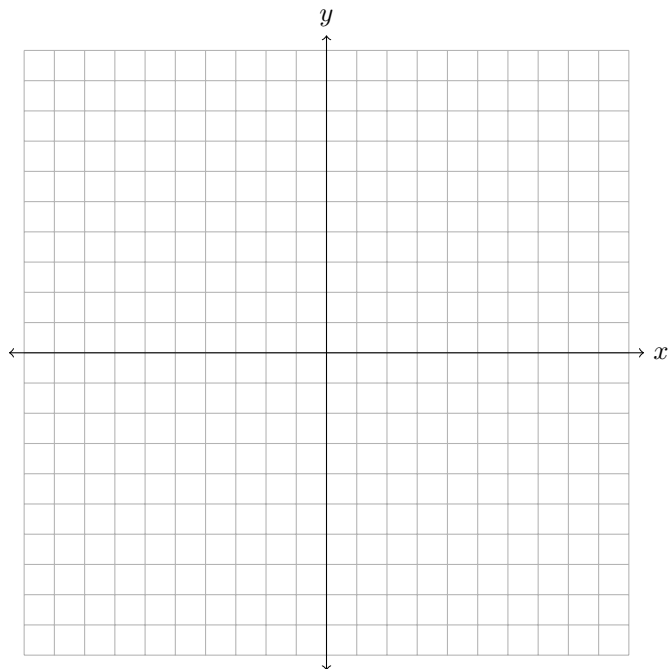


- (6^{pts}) 6. Given the equation $x = y^2 + 2y + 1$. Fill in the table to complete each ordered pair.

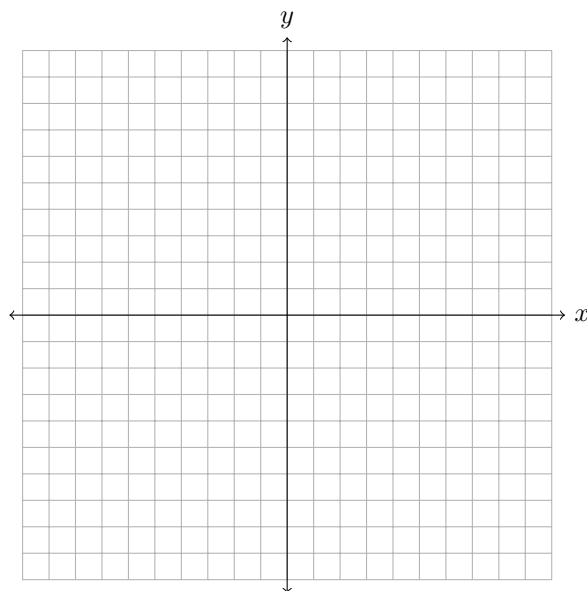
x	y
0	
	$\sqrt{3}$
81	
	-2
9	
	$-\sqrt{5}$

- (7^{pts}) 7. Given the equation $2x - 3 = 1 - 4y$, find the following:
- (a) (2 pts) x -intercept (b) (2 pts) y -intercept

- (c) (3 pts) Sketch the graph and list two other points.



- (6^{pts}) 8. On the graph below, plot and label the points: $(4, 15)$, $(-6, -5)$, $(-9, 7)$, $(8, -2)$, $(0, -10)$, and $(5, 0)$.



(10^{pts}) **9.** Consider the points $(2, 2)$, $(6, 3)$, and $(4, 11)$.

(a) (6 pts) Determine if the given points form a right triangle, an isosceles triangle, or neither.

(b) (4 pts) What is the area of the triangle?

(7^{pts}) **10.** Given the equation $4 - 2y = -2 - 6x$, find the following:

(a) (2 pts) x -intercept

(b) (2 pts) y -intercept

(c) (3 pts) Sketch the graph and list two other points.

