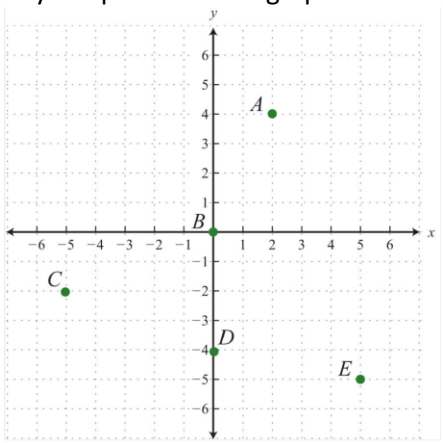
MDE 010, Homework #8, Summer 2023 Name _____

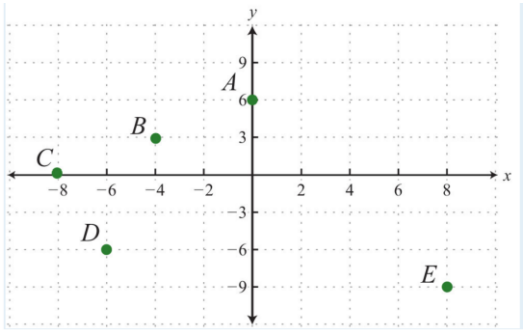
**Instructions**: Record your answers to each of these problems directly on this page. Do the work on a separate page and attach these pages to this one. You should do the work by hand, but you may check your work with a calculator. You can find printable graph paper here: http://betsymccall.net/prof/courses/resources/graphpaper.html

1. Identify the points on the graph and label each quadrant.

a.

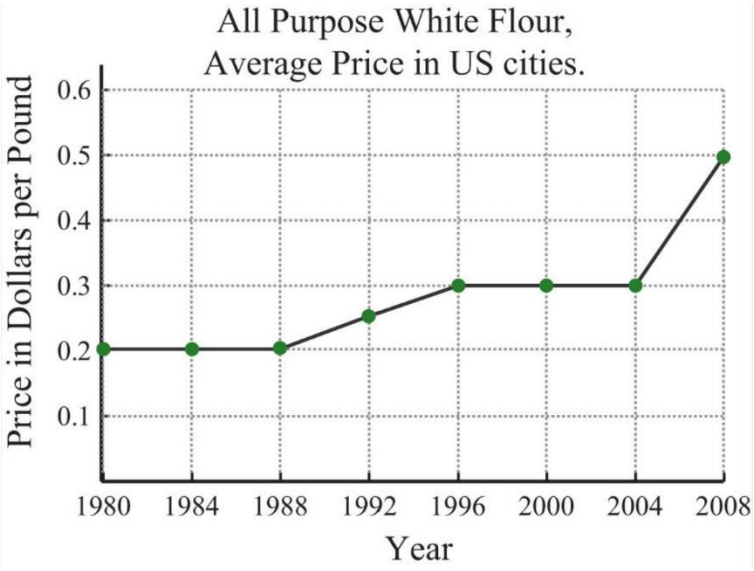



b.




2. Graph the listed points on a graph and identify which quadrant (if any) that the point falls in.
   a. $\{(-8,3),(-4,6),(0,-6),(6,9)\}$
   b. $\{(-3.5,0),(-1.5,2),(0,1.5),(2.5,-1.5)\}$

3. Answer the questions based on the graph.
   a. What was the average price of flour in 1988?
   b. What was the average price of flour in 1996?




4. Determine whether the given point satisfies the equation.
   a. 3x−4y=10; (2, −1)
   b. −10x+2y=−95; (15, 110)
   c. y=−13x−12; (12, −23)
   d. y=4; (4, −4)
   e. x=3; (3, −3)

5. Given the set of x-values {−2, −1, 0, 1, 2}, find the corresponding y-values and graph them.
   a. y=2x−1
   b. 6x−3y=9
   c. y=−5

6. Plot the graphs and label the intercepts.
   a. y=x
   b. −x+5y=0
   c. y=−4x+2
   d. y=−10
   e. x=−1

7. Graph the equations on a graph. Label any intercepts. Plot at least 5 points. Include values of x that are both positive and negative.
   a. $y = x^2 - 3x - 4$
   b. $x^2 + y^2 = 4$
   c. $y = |x|$
   d. $y = 2^x$

8. Graph the inequalities on a graph. Shade appropriately.
   a. $3x + 4y > 12$
   b. $y \leq -3x + 9$
   c. $y > 10$