Appetizers: Pick 2 out of the 3 questions to complete. (4 marks)

Option 1: In each quadrant, what are the signs (positive or negative) of the x-coordinate and the y-coordinate for any point? Fill in the table below.

Quadrant	x-coordinate (positive or negative)	y-coordinate (positive or negative)
1 (First)		
2 (Second)		
3 (Third)		
4 (Fourth)		

For Option 2 and Option 3, use Grid A to answer the question.

Option 2: What point on the grid matches each description?

Description	Point (Letter)
Highest	
Furthest Left	
In the fourth quadrant	
Located at the origin	
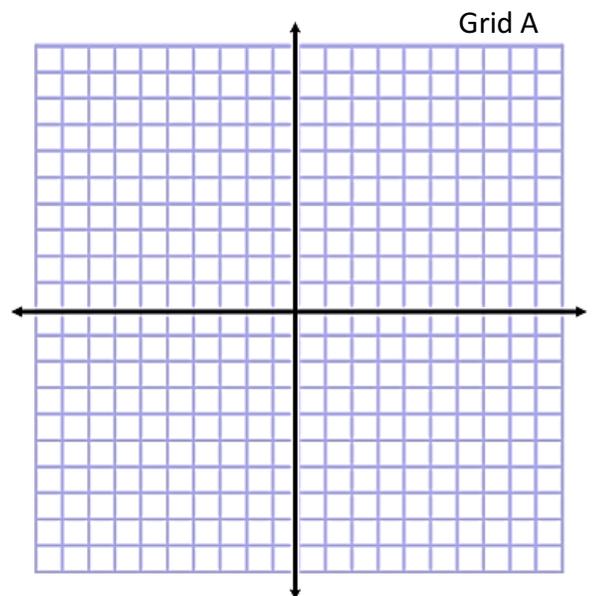
Option 3: What is the distance between the identified points?

Points	Distance
D and R	
P and G	

Grid A

Entrée: Complete both questions. Use the grids to answer the questions. (14 marks)

Question 1: Translations and Reflections (8 points)

a) Plot the following points of the shape ABCD:
    o   A(2, 4), B(5, 1), C(5, -5), D(2, -2)
b) Translate the shape 2 left and 4 down.
c) Replot the points and label these points as A', B', C', D'. List the coordinates of the image's vertices.
d) Reflect A'B'C'D' across the y-axis.
e) Replot the points and label these points as A'', B'', C'', D''. List the coordinates of the image's vertices.
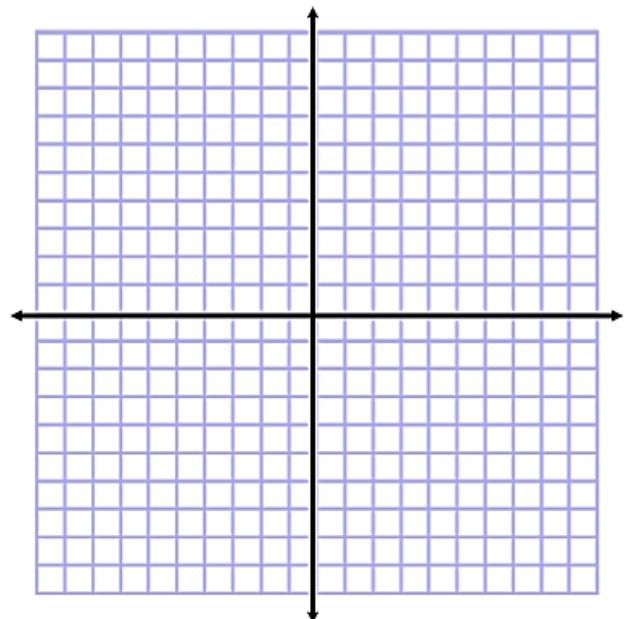
Question 2: Rotations (6 points)

    a) Plot the following points of ΔDEF:
            ○ D(1, 3), E(4, 7), F(4, 1)
    b) Rotate ΔDEF 270° around the origin.
         Replot the points
    c) Label these points and list the
         coordinates of the image's vertices.
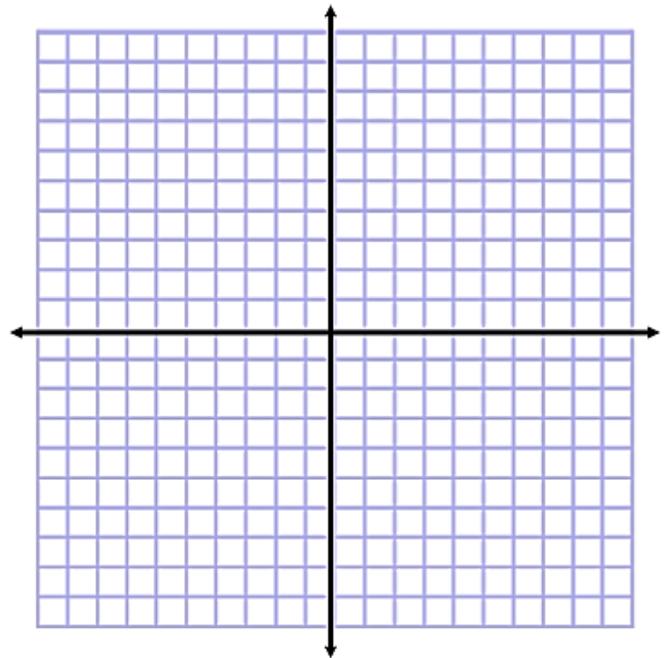
Dessert: Pick 1 out of the 2 questions to complete. (4 marks)

Option 1: Fill in the Blanks of the following statements:

- When you reflect a shape across the x-axis, the _____ coordinate changes from positive
to _____ or negative to _____.

- When you reflect a shape across the y-axis, the _____ coordinate changes from
_____ to negative or _____ to positive.

Option 2: Effect of Translations

- If a shape is translated from the third (3rd) quadrant to the second (2nd) quadrant, then the
_____ coordinate went from negative to positive and the _____ coordinate remains
negative.

- When a point is translated from (5, -8) to (1, 4), the point was originally in the _____
quadrant and the image of the point is the _____ quadrant.