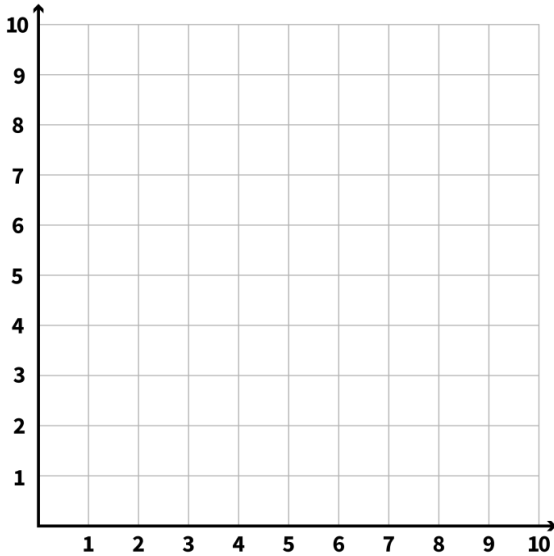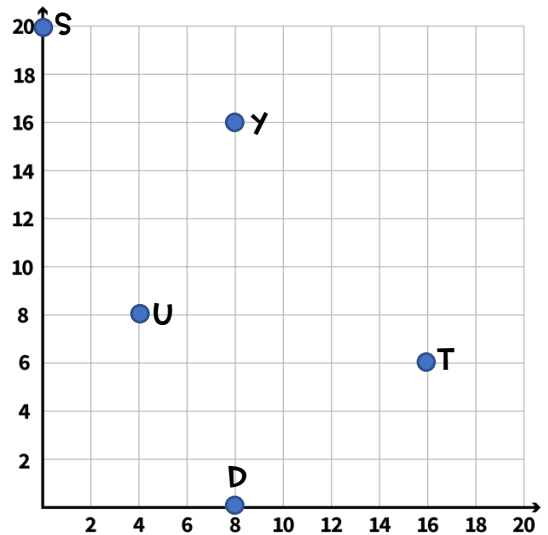# ADVANCED MATH — UNIT 7 STUDY GUIDE

VOCABULARY

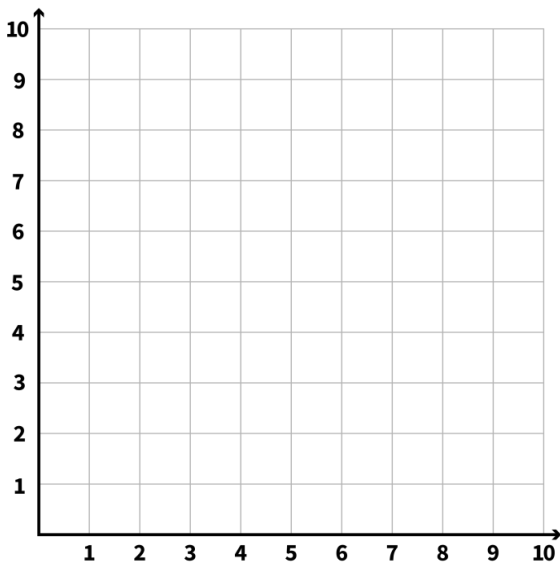Label the following on the image to the left.

1. Coordinate Plane
2. X-Axis
3. Y-Axis
4. Origin

Shannon graphed five points on the coordinate plane pictured. What are the coordinates for each of the points he plotted?

S: _____
T: _____
U: _____
D: _____
Y: _____

Ms. Fullerton used the same coordinate plane as Shannon and wants to plot a new point, A, at (2, 12). Explain the process she needs to follow to plot her point in the correct spot. Be specific!

_____
_____
_____
_____
_____

On the coordinate plane pictured, graph the following points:

(10,4)
(6,6)
(0,3)
(2,9)
(4,0)
(5,3)

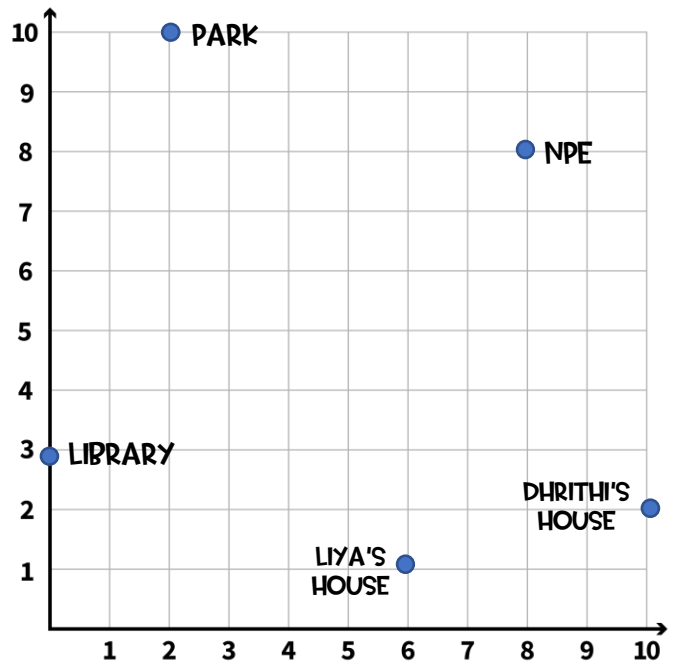Liya and Dhrithi are walking home from school. Instead of going straight home, they make two stops along the way.

Their first stop is at the Park. Describe the route the girls would take to travel from New Prospect to the Park.
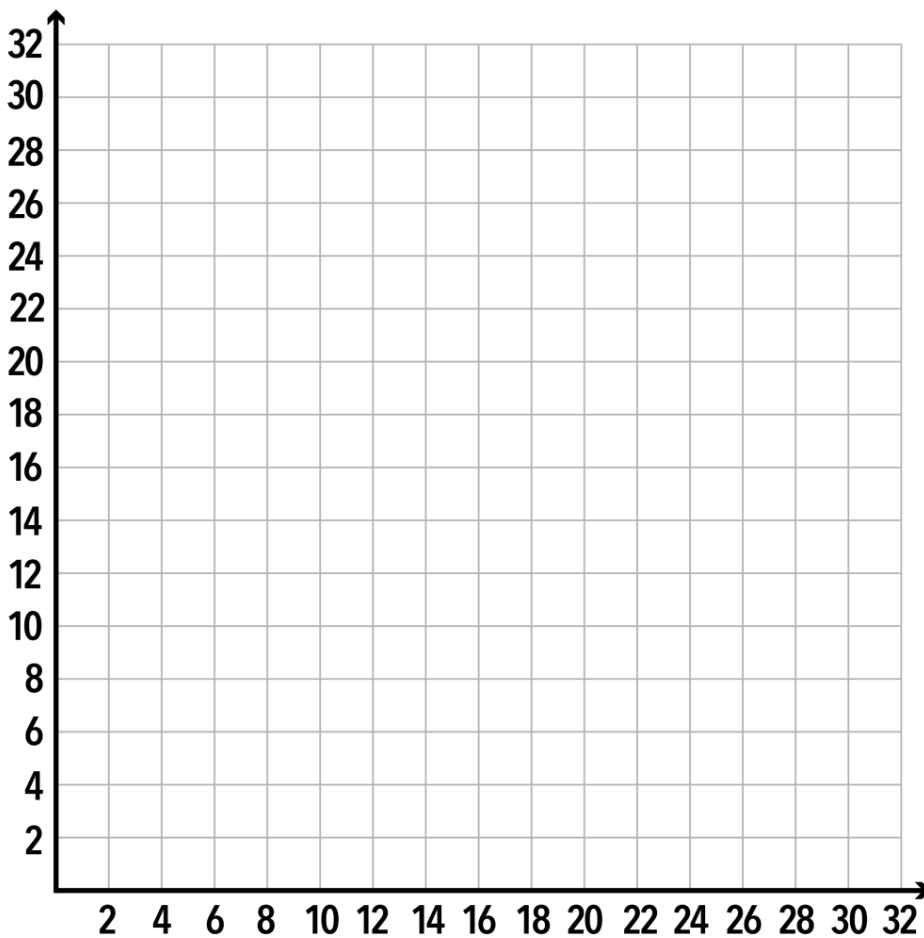
_____
_____
_____

The girls then stop at the library. Describe the route the girls would take from the park to the library.

_____
_____
_____

The girls then walk to Liya's house. Describe the path the girls would take from the library to Liya's house.

_____

Dhrithi then walks home alone. Describe the path Dhrithi will take home from Liya's house.

_____

In total, how many blocks did the girls walk? _____

Mr. Lew wants to use the coordinate grid above to make a graph representing three different patterns. Each pattern follows a different rule. Determine the missing values in the tables below and use the appropriate color to graph the line representing the pattern on the coordinate grid.

Red Line
$y = x + 4$

x	y
8	
	16
22	

Blue Line
$x = y - 2$

x	y
	10
18	
28	

Green Line
$y = x \div 2$

x	y
12	
	10
28	

Identify the rule followed for each of the following value tables.

X	18	17	12	5
Y	15	14	9	2

What is the rule performed on x to get y?

_____

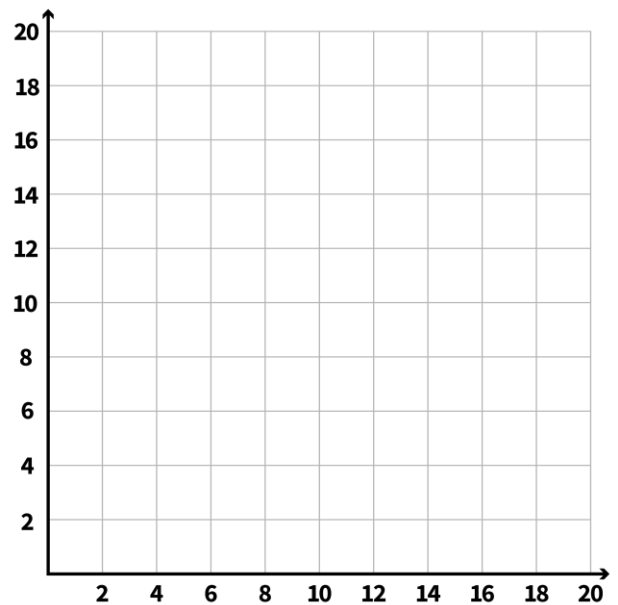| X	2	4	5	7
Y	6	12	15	21

What is the rule performed on x to get y?

_____

Fill in the table according to the given pattern rule and graph the result. Use different colors for different lines!

X	0			
Y	0			

X: Add 3 to get the next term
Y: Add 5 to get the next term.

X	0			
Y	0			

X: Add 2 to get the next term
Y: Multiply x by 2 to get the next term..

Sydney and Roma are working on drawing 2D figures on the coordinate plane. Both girls are missing one point they need to create their figure. Plot the points given and determine the missing point to create their shape.

Sydney's Figure: Rectangle

(4, 28)
(10, 28)
(4, 14)

Missing Ordered Pair:_____

Roma's Figure: Rhombus

(18,16)
(16,10)
(26,10)

Missing Ordered Pair:_____