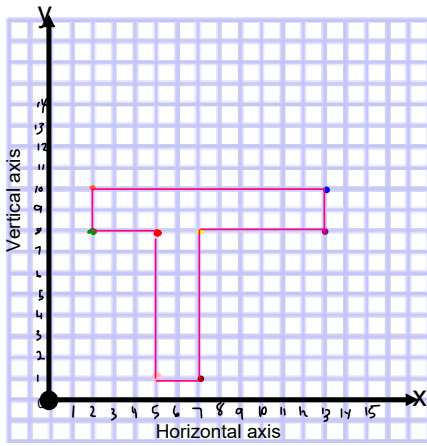
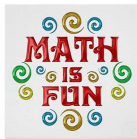


# Lesson 1

## E learn



Warm Up Grade 6  
Ch. 8 Transformations

Date: \_\_\_\_\_

$(\vec{x}, \vec{y})$

plot in order and connect as you go

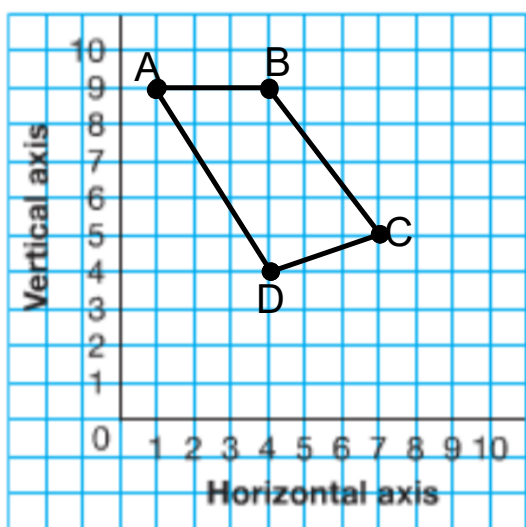
(5, 8), (2, 8), (2, 10), (13, 10), (13, 8),

(7, 8), (7, 1), (5, 1)

back to (5, 8)



What shape did this make? Looks like a T



We can use the ordered pairs to describe this shape on the Cartesian plane.

To describe the shape, we label its vertices with letters. The letters are written in order as you move around the perimeter of the shape

$(x, y)$

Follow alphabetical order

Point A has coordinates  $(1, 9)$

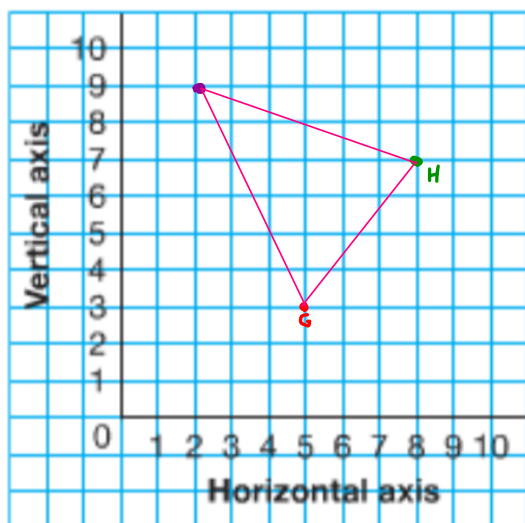
Point B has coordinates  $(4, 9)$

Point C has coordinates  $(7, 5)$

Point D has coordinates  $(4, 4)$

You try

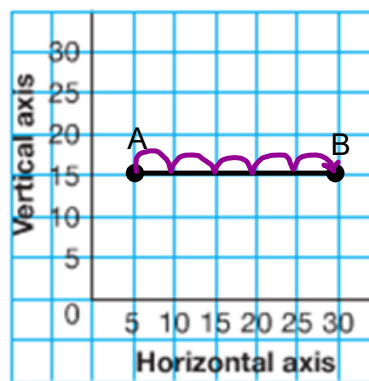
Given the coordinates  $G(5,3)$ ,  $H(8,7)$  and  $I(2,9)$ , what shape did you make? (Make sure to label the points)



## Finding length of a vertical or horizontal line

### Strategy #1

### Counting Squares



**First:** find out how many squares are between the line segment AB

5 squares

**Second:** Look at your scale. This will tell you the side length of each square.

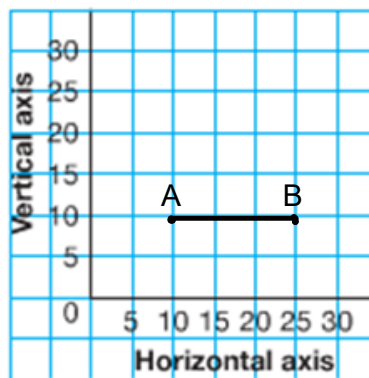
1 square = 5 units

**Third:** Multiple the number or squares by your side length

$$5 \text{ sq} \times 5 \text{ units} = 25 \text{ units}$$

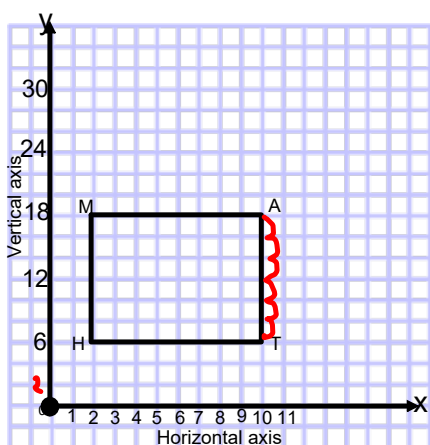
## Strategy #2

Using the Coordinates  
of the points



**First:** The first coordinate of an ordered pair tells how far you move right ( $\overset{A}{\underset{\uparrow}{10}}, 10$ ) and ( $\overset{B}{\underset{\uparrow}{25}}, 10$ )

**Second:** The horizontal distance between AB is:  $25 - 10 = 15$  (So the line is 15 m long)  
*units*



Give coordinates of vertices

M (2, 18)

A (10, 18)

T (10, 6)

H (2, 6)

→ Height =  $18 - 6$   
= 12 units

What is the height of the rectangle? Which strategy did you use?

What is the width of the rectangle? Which strategy did you use?

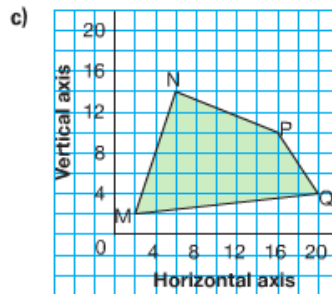
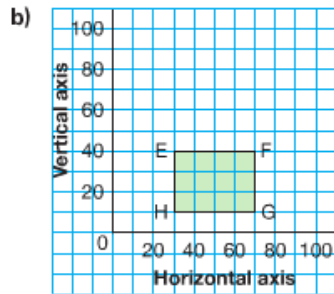
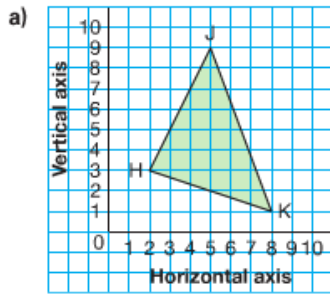
# Class/Homework

page 293-294 #1, #2

Can't do the #3 on since you have no graph paper at home but if you do you can try those as well

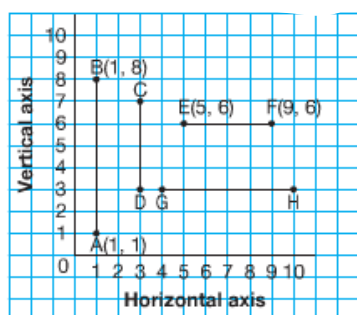
**Practice**

1. Write the coordinates of the vertices of each shape.





2. Find the length of each line segment on this coordinate grid.



3. Copy this grid.

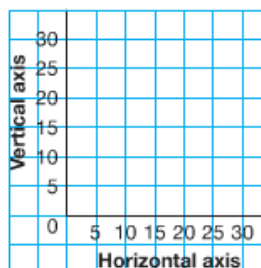
a) Plot each point on the grid.

A(10, 5)      B(5, 15)      C(10, 25)

D(20, 25)      E(25, 15)      F(20, 5)

b) Join the points in order. Then join F to A.

c) Describe the shape you have drawn.



## Elearning Gr 6 Math Ch. 6 L1 Transform Draw shapes on grid.notebook

4. Draw and label a coordinate grid.
- a) Plot each point on the grid.  
What scale will you use? Explain your choice.

J(4, 2)      K(4, 10)      L(10, 12)      M(10, 4)

- b) Join the points in order. Then join M to J.  
Describe the shape you have drawn.

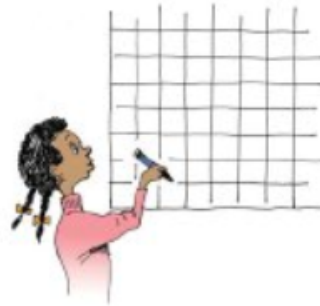
## Elearning Gr 6 Math Ch. 6 L1 Transform Draw shapes on grid.notebook

5. Draw a shape on a coordinate grid.  
Each vertex should be at a point where grid lines meet.  
List the vertices of the shape, in order.  
Trade lists with a classmate. Use the list to draw your classmate's shape.

## Elearning Gr 6 Math Ch. 6 L1 Transform Draw shapes on grid.notebook

6. Draw and label a coordinate grid.
- a) Plot each point on the grid.  
What scale will you use?  
Explain your choice.  
A(10, 30)      B(35, 30)      C(35, 15)      D(10, 15)
- b) Join the points in order. Then join D to A.  
Describe the shape you have drawn.
- c) Find the length of each side of the shape.  
Show your work.

7. Draw and label a coordinate grid.
- a) Plot the points A(5, 1) and B(5, 5).  
Join the points.
  - b) Find point C so that  $\triangle ABC$  is isosceles.  
How many different ways can you do this?  
Draw each way you find.  
Write the coordinates of C.  
How do you know each triangle is isosceles?
  - c) Find point D so that  $\triangle ABD$  is scalene.  
Show 3 different scalene triangles.  
Write the coordinates of D.  
How do you know each triangle is scalene?



## Elearning Gr 6 Math Ch. 6 L1 Transform Draw shapes on grid.notebook

8. Draw and label a coordinate grid.
  - a) Plot these points: E(5, 1), F(3, 3), G(5, 6)
  - b) Find the coordinates of Point H that forms Kite EFGH.  
Explain the strategy you used.

## Elearning Gr 6 Math Ch. 6 L1 Transform Draw shapes on grid.notebook

9. The points  $A(10, 8)$  and  $B(16, 8)$  are two vertices of a square.  
Plot these points on a coordinate grid.
- What are the coordinates of the other two vertices?  
Find as many different answers as you can.
  - What is the side length of each square you drew?