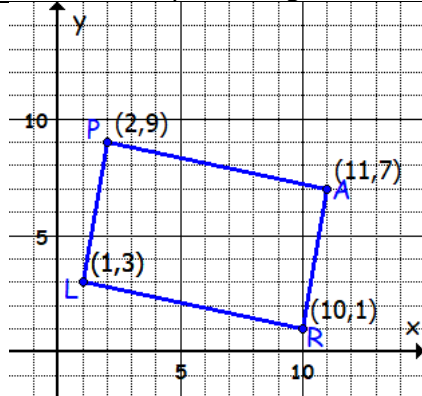


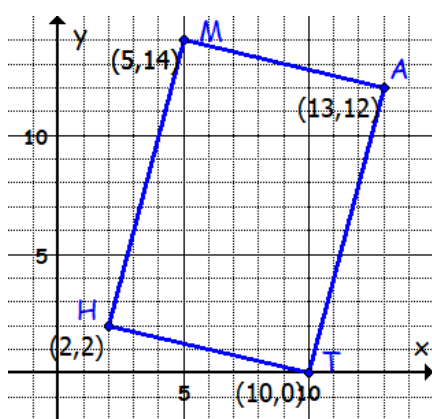
Group member names: \_\_\_\_\_

C-Level

1. Is this a parallelogram? Show your work. Explain your answer. (7 points)



2. Complete the table. Show your work. (21 points)

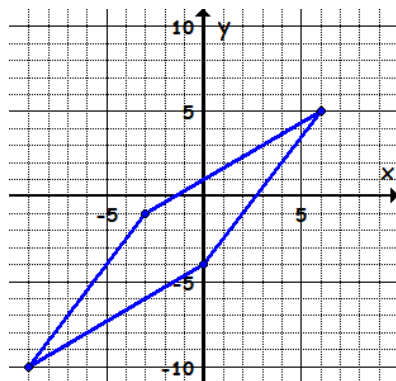


Diagonal midpoints	Diagonal slopes	Diagonal lengths

Type of quadrilateral?

Find the area of MATH.

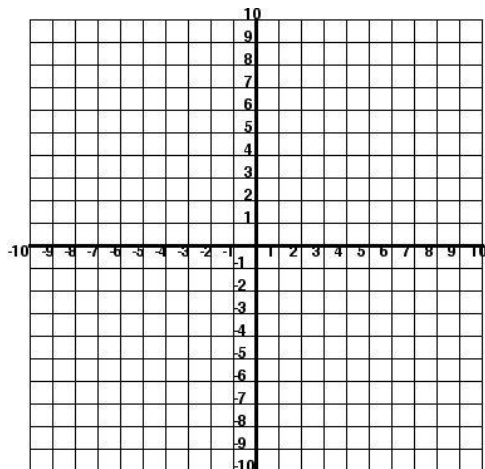
3. Given the shape is a rhombus. Find the area and perimeter of the rhombus. Show your work. (7 pts)



B-Level

4. (6 points)

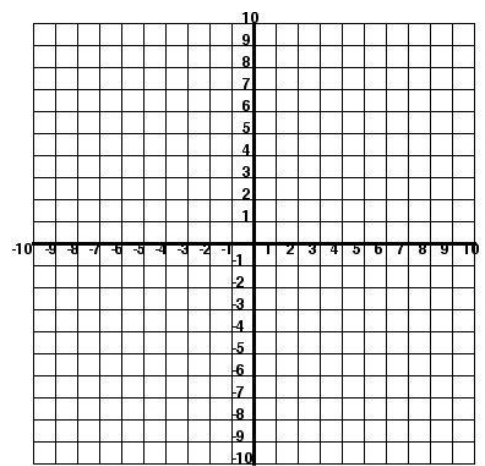
Plot  $S(-8,3)$   $H(4,7)$   $A(8,-5)$   $P(-4,-9)$ .  
Draw quadrilateral SHAP.



What is the most specific type of quadrilateral to call SHAP?  
Mathematically Justify your answer.

5. (4 points)

Plot  $A(-7,5)$ ,  $B(3,5)$ ,  $C(7,-3)$ ,  $D(3,-3)$ ,  
 $E(-2,-8)$ ,  $F(-7,-3)$ . Draw polygon  
ABCDEF.



Find the perimeter of Polygon ABCDEF.

Find the area of Polygon ABCDEF.

A-Level (5 points)

Given:  $\overline{AC}$  and  $\overline{BD}$  bisect each other.

Prove: Opposite sides are congruent and ABCD is a parallelogram.

