

Day 11 - Triangle Terms

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| <ul style="list-style-type: none">• Scalene: no sides equal• Isosceles: 2 sides equal• Equilateral: all sides equal | <ul style="list-style-type: none">• Acute: all angles less than 90• Obtuse: 1 angle more than 90• Right: 1 angle exactly 90 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|

Quadrilateral Terms

- Trapezoid: 1 set of parallel lines
- Parallelogram: 2 sets of parallel lines
- Rectangle: 4 right angles
- Rhombus: 4 equal sides
- Square: 4 equal sides and 4 right angles

Other geometry terms

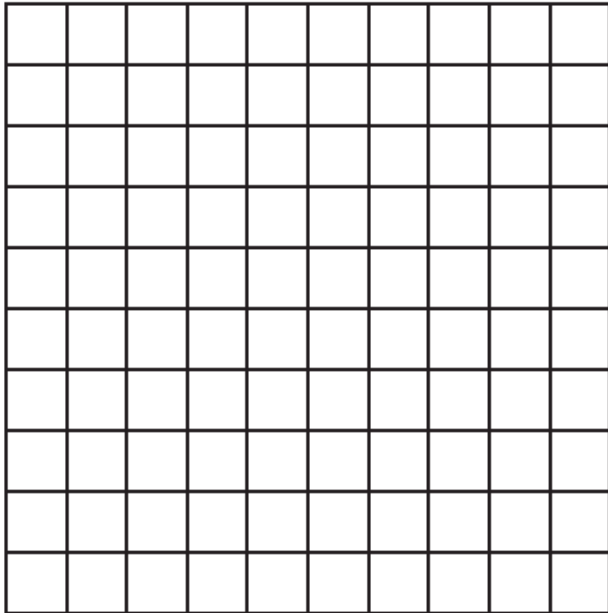
- Midpoint: middle point
- Prism: 2 identical shapes make a 3-D object (shoe box)
- Pyramid: shape on bottom, comes to point

OGT Preparation #11

Name _____

GE05 - identifying polygons and properties of polygons

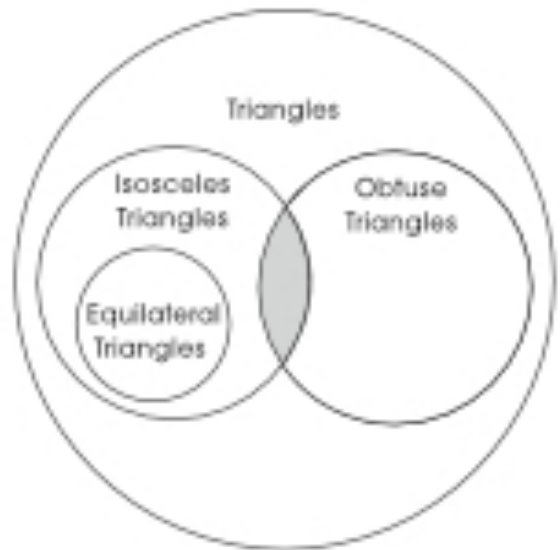
1. An electronics engineer is programming the computer that controls the circuit board cutting tools. He enters the coordinates of the vertices of a rectangular circuit board. The first three coordinates are (2, 0), (2, 6) and (6, 6).







What are the coordinates of the fourth vertex?

- A. (0, 2)
- B. (0, 6)
- C. (6, 0)
- D. (6, 2)

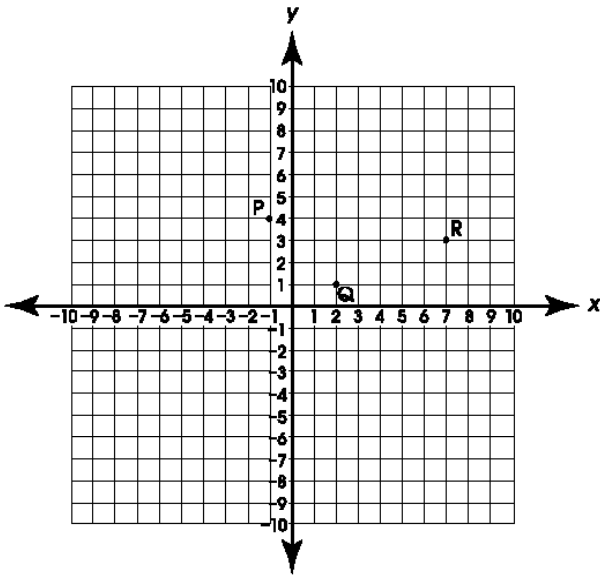
2. The Venn diagram below represents relationships among various kinds of triangles.



Which of the following triangles is included in the shaded region?

- A. 
- B. 
- C. 
- D. 

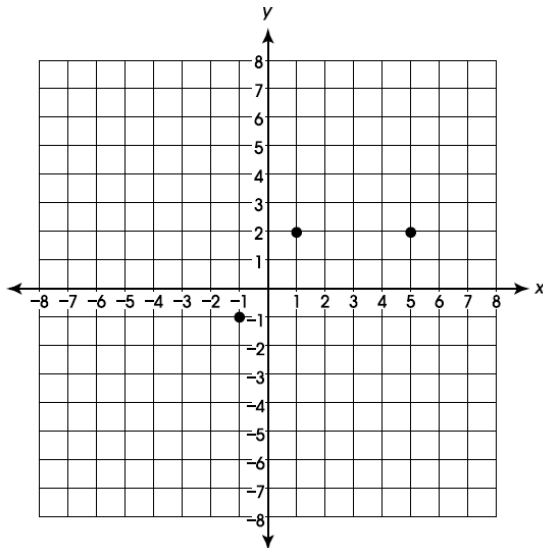
3. Points P, Q and R are shown below.



These points are three vertices of a parallelogram. What are the coordinates of the fourth vertex of parallelogram PQRS?

- A. (4, 6)
- B. (5, 2)
- C. (8, -1)
- D. (9, 1)

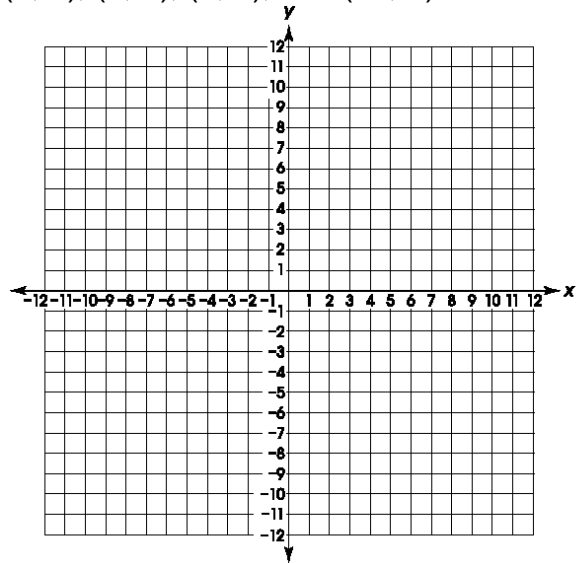
5. Three vertices of a quadrilateral are $(-1, -1)$, $(1, 2)$ and $(5, 2)$.



When used as the last vertex, which point would make the quadrilateral a trapezoid?

- A. (3, 0)
- B. (3, -2)
- C. (-5, 0)
- D. (7, -1)

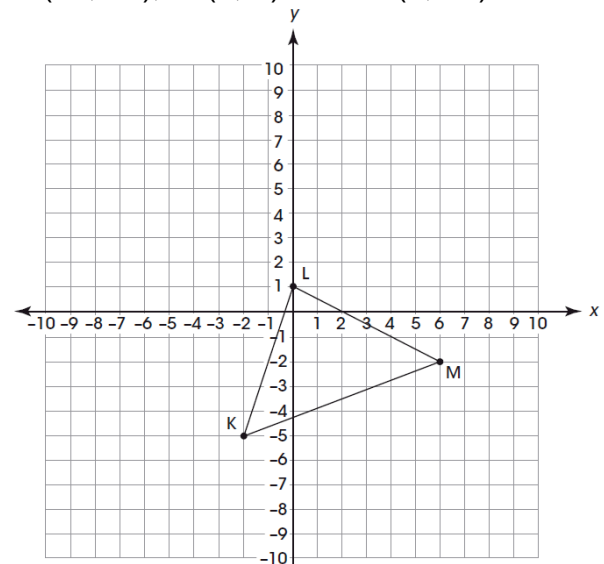
4. The vertices of a quadrilateral are $(2, 2)$, $(4, 6)$, $(8, 2)$, and $(10, 6)$.



Which describes this quadrilateral?

- A. parallelogram
- B. rectangle
- C. rhombus
- D. square

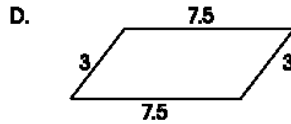
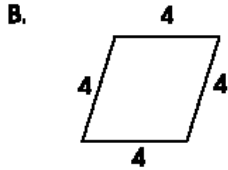
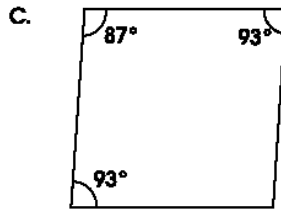
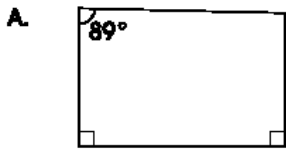
6. The coordinates of triangle KLM are K: $(-2, -5)$, L: $(0, 1)$ and M: $(6, -2)$.



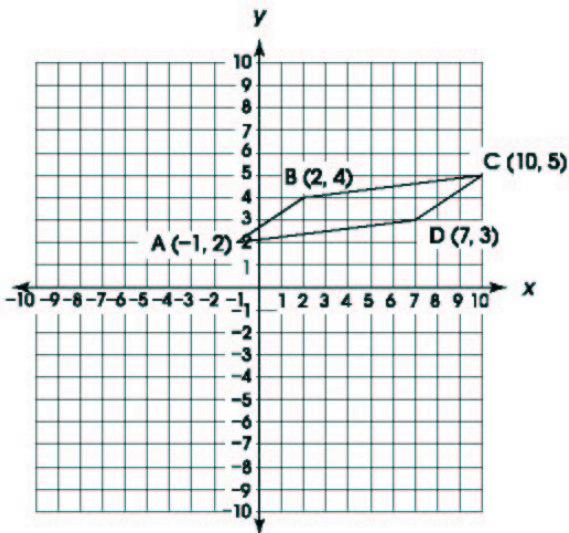
What type of triangle is KLM?

- A. obtuse isosceles
- B. acute scalene
- C. right isosceles
- D. right scalene

7. Which figure is **not** a parallelogram?

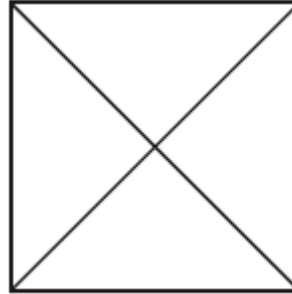


9. [SA] Four points are connected with line segments, as shown on the coordinate plane below.



Determine if the shape is a parallelogram. Show your work or provide an explanation to support your answer.

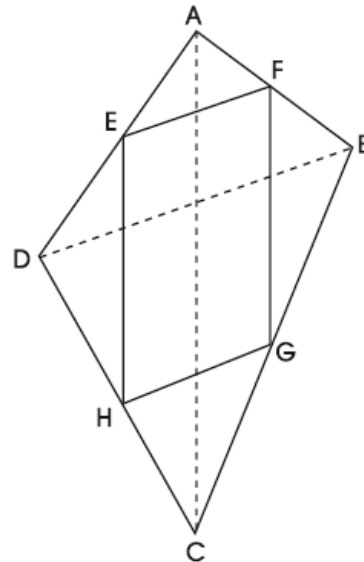
8. The figure shows a three-dimensional object when viewed from above.



Which of these objects could the sketch represent?

- A. pentagonal pyramid
- B. rectangular prism
- C. square pyramid
- D. triangular prism

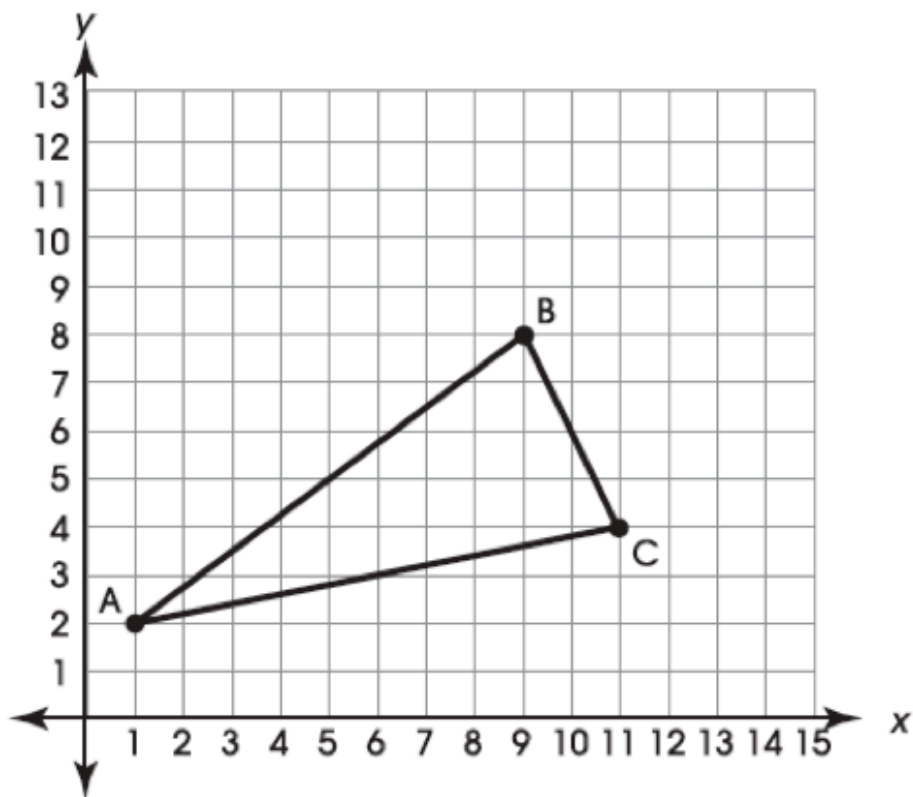
10. Points E, F, G, and H are midpoints of the sides of quadrilateral ABCD.



If $AC = 12$ and $BD = 8$, what is the perimeter of quadrilateral EFGH?

- A. 96
- B. 40
- C. 20
- D. 4

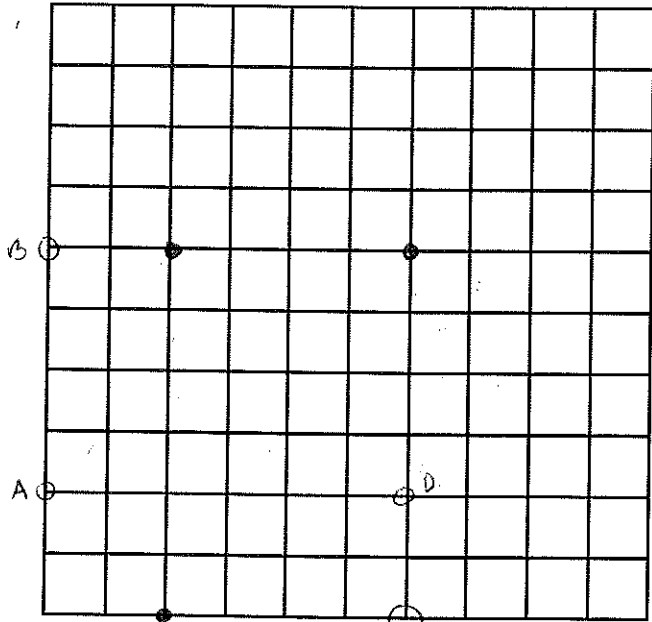
40. Triangle ABC is shown on the graph.



In your **Answer Document**, show that the segment connecting the midpoints of \overline{AB} and \overline{BC} is parallel to \overline{AC} and one-half its length. Show your work or provide an explanation for your answer.

GE05 - identifying polygons and properties of polygons

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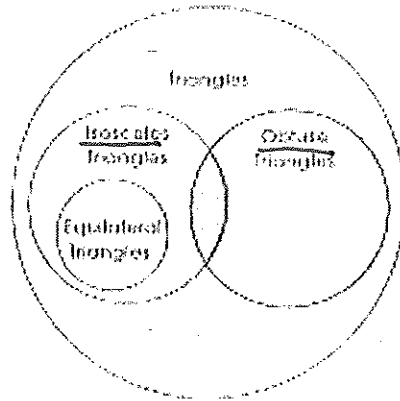


What are the coordinates of the fourth vertex?

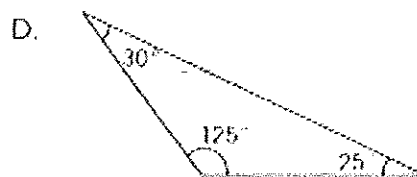
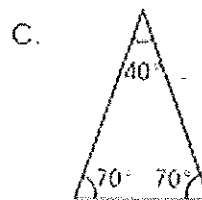
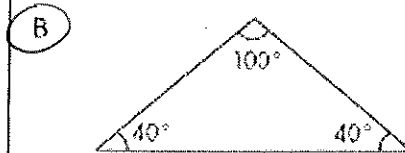
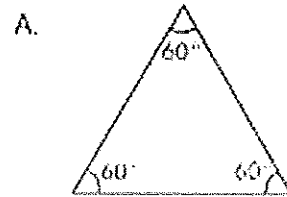
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Isosceles
1 1
d d
e e

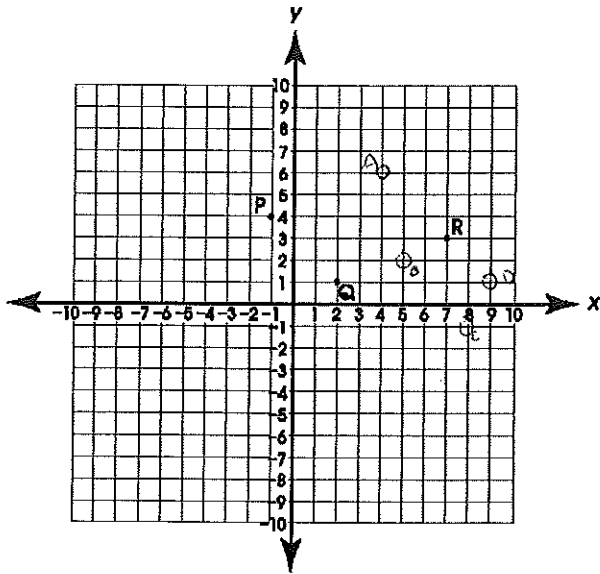
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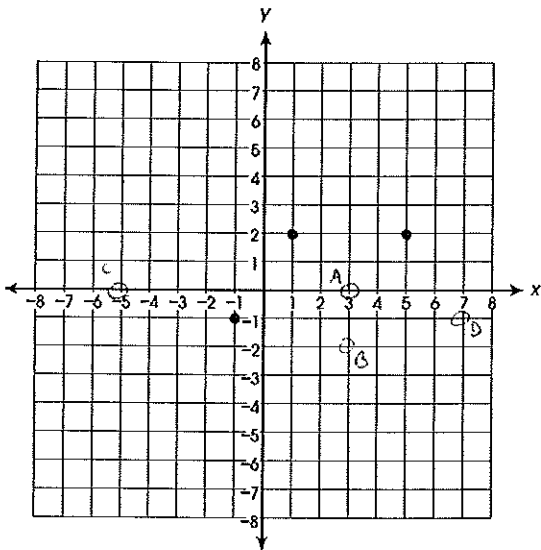
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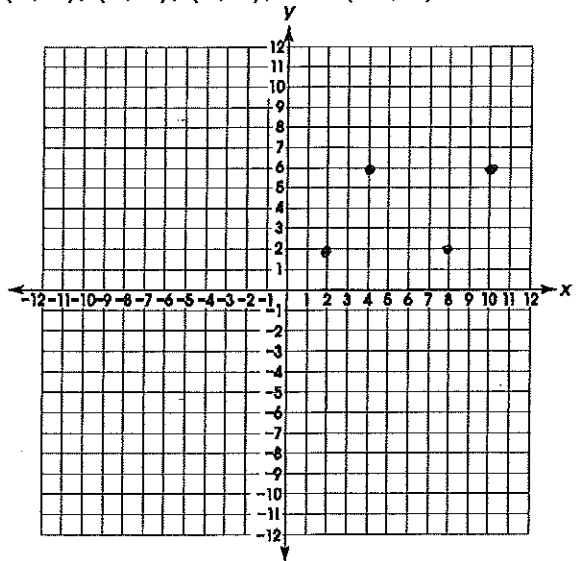
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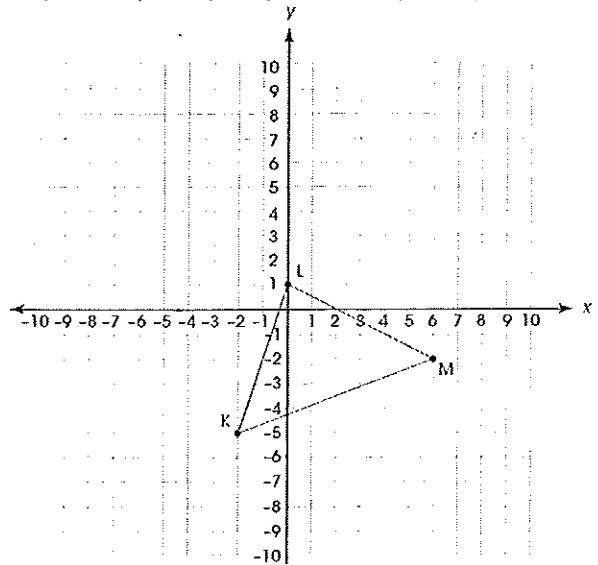
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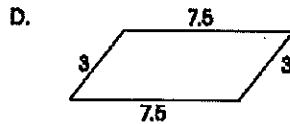
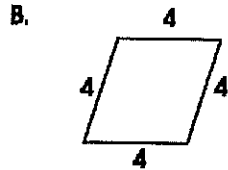
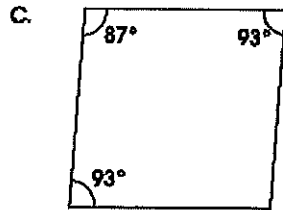
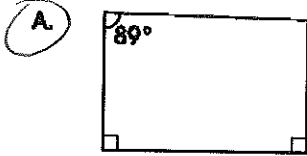
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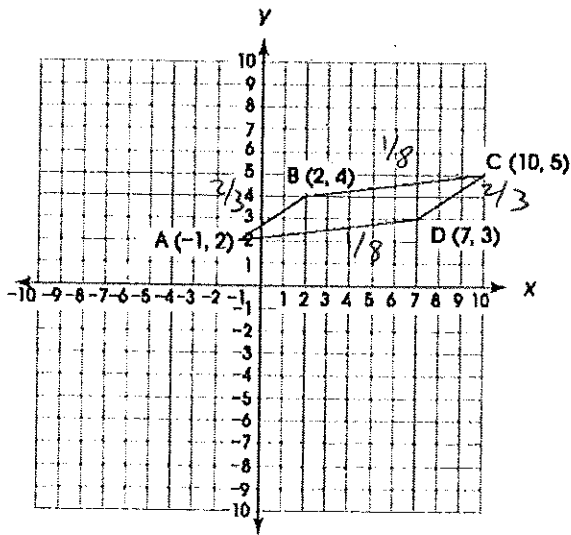
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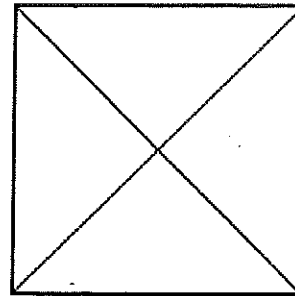


Determine if the shape is a parallelogram. Show your work or provide an explanation to support your answer.

Yes, slopes $\frac{2}{3}$, $\frac{2}{3}$ make \parallel
 slopes $\frac{1}{8}$, $\frac{1}{8}$ make \parallel

parallelogram.

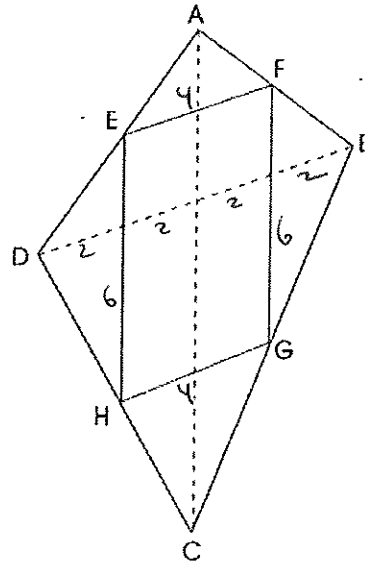
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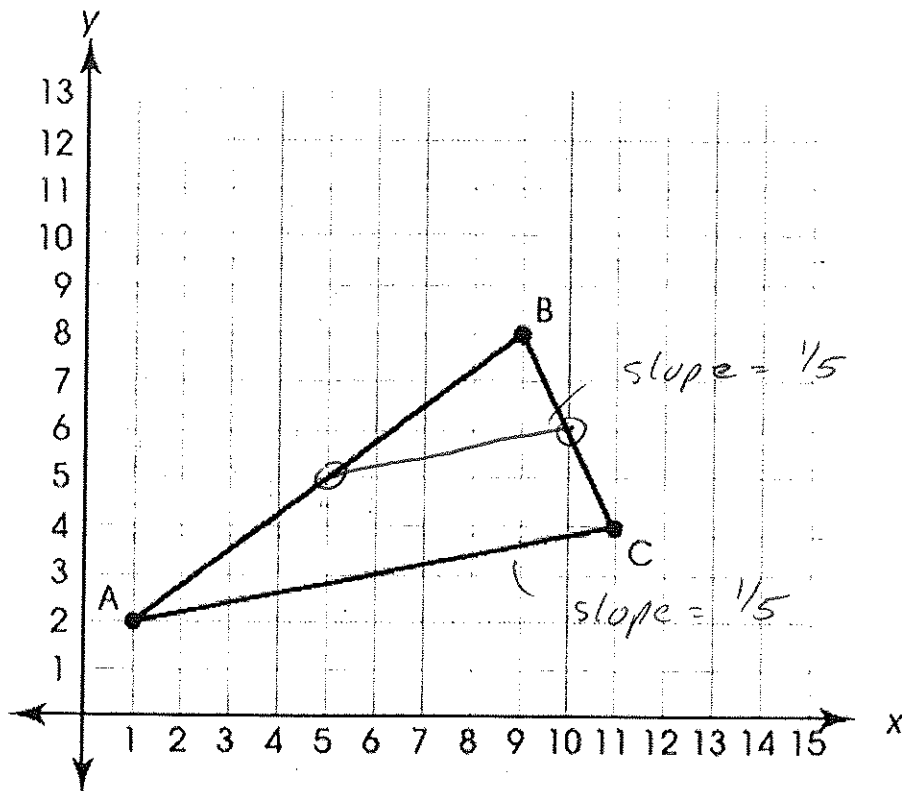
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same slopes = parallel

$$\begin{array}{|c|} \hline 5 \\ \hline \sqrt{26} = 5.1 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline 10 \\ \hline \sqrt{104} = 10.2 \\ \hline \end{array}$$

$\frac{1}{2}$ as long