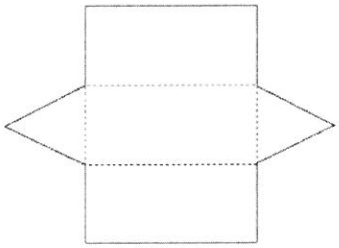
(2)

Geometry
1, 9
Krauss

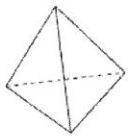
OGT Questions from
Geometry & Spatial Sense

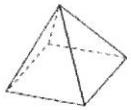
Name: _____ Date: _____ Block: _____

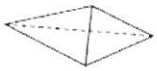
11. The figure shows the net for a three-dimensional object.

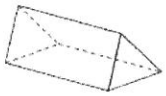


When folded, which object will this net produce?

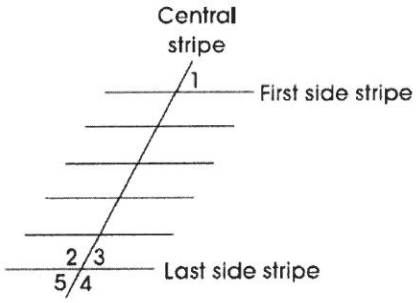
A. 

B. 

C. 

D. 

25. A worker painted stripes for spaces in a parking lot. The worker first painted a center stripe that marked the front of the parking spaces. Then he painted parallel stripes marking the sides.



Which angles will be congruent to angle 1 if all the side stripes are parallel?

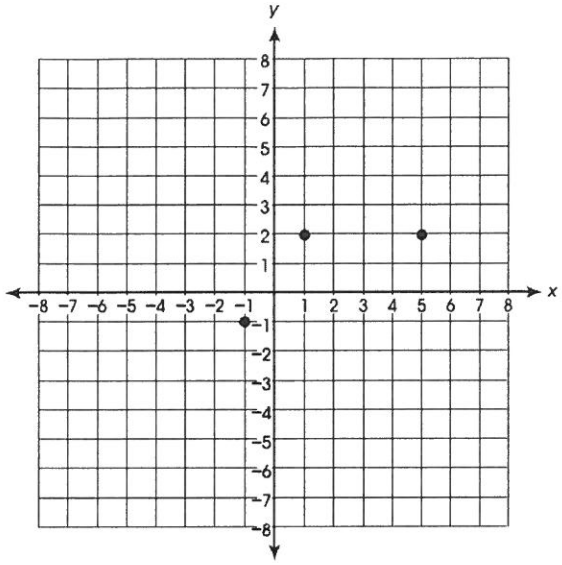
A. $\angle 2$ and $\angle 3$

B. $\angle 2$ and $\angle 5$

C. $\angle 3$ and $\angle 5$

D. $\angle 4$ and $\angle 5$

29. 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?

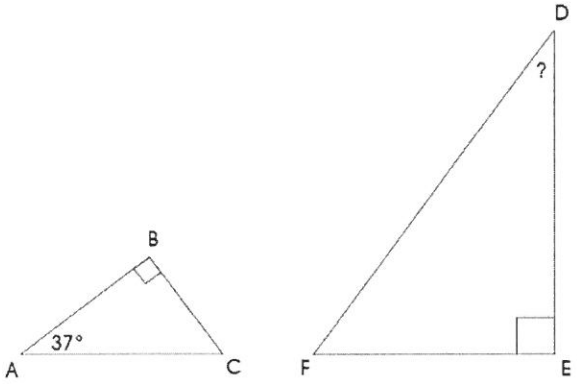
A. (3, 0)

B. (3, −2)

C. (−5, 0)

D. (7, −1)

37. $\triangle ABC \sim \triangle DEF$.



What is the measure of angle D?

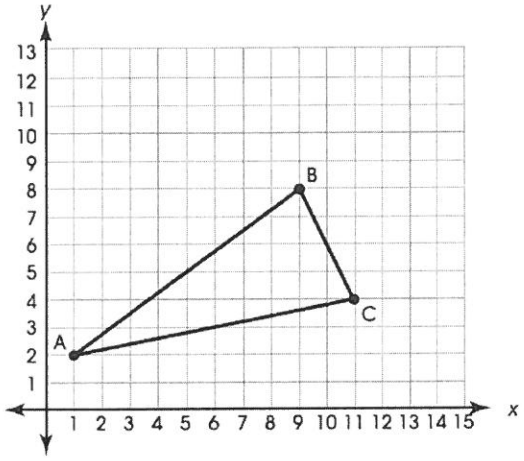
A. 37°

B. 45°

C. 53°

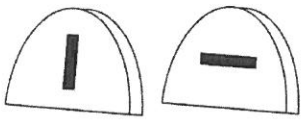
D. 74°

40. Triangle ABC is shown on the graph.



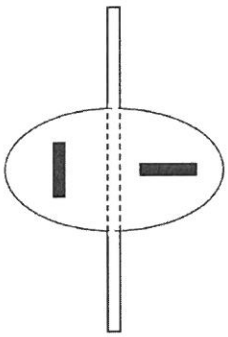
In your **Answer Document**, show that the segment connecting the midpoints of $\overline{AB}$ and $\overline{BC}$ is parallel to $\overline{AC}$ and one-half its length. Show your work or provide an explanation for your answer.

4. The figure shows two views of the same object.

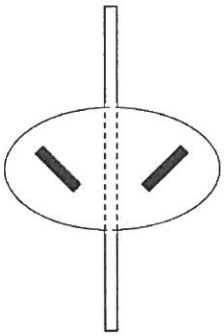


Which net will make the figure shown?

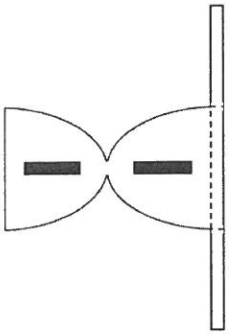
A.



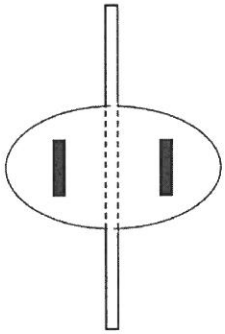
B.



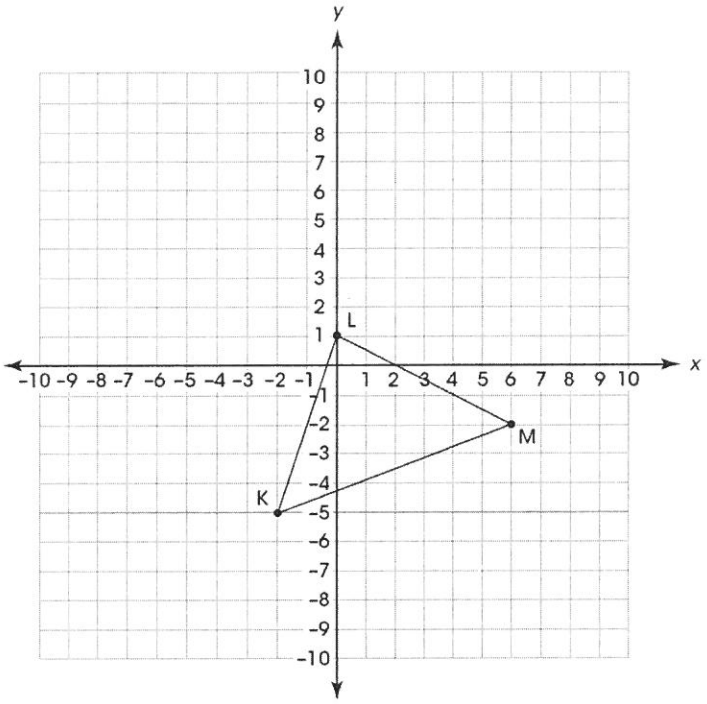
C.



D.



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



What type of triangle is KLM?

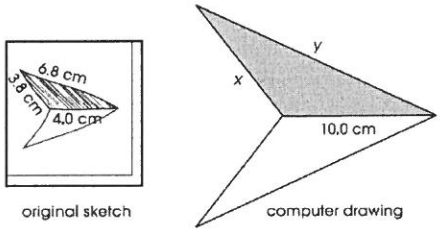
A. obtuse isosceles

B. acute scalene

C. right isosceles

D. right scalene

37. An airline executive drew a sketch of a logo on a napkin.



She gave the logo to a graphic designer so he could make a mathematically similar version with a computer drawing program. The center line of the new logo needs to be 10 centimeters long. Which of these proportions could the graphic designer use to find the value of y?

A. $\frac{4.0}{3.8} = \frac{y}{10.0}$

B. $\frac{3.8}{y} = \frac{6.8}{10.0}$

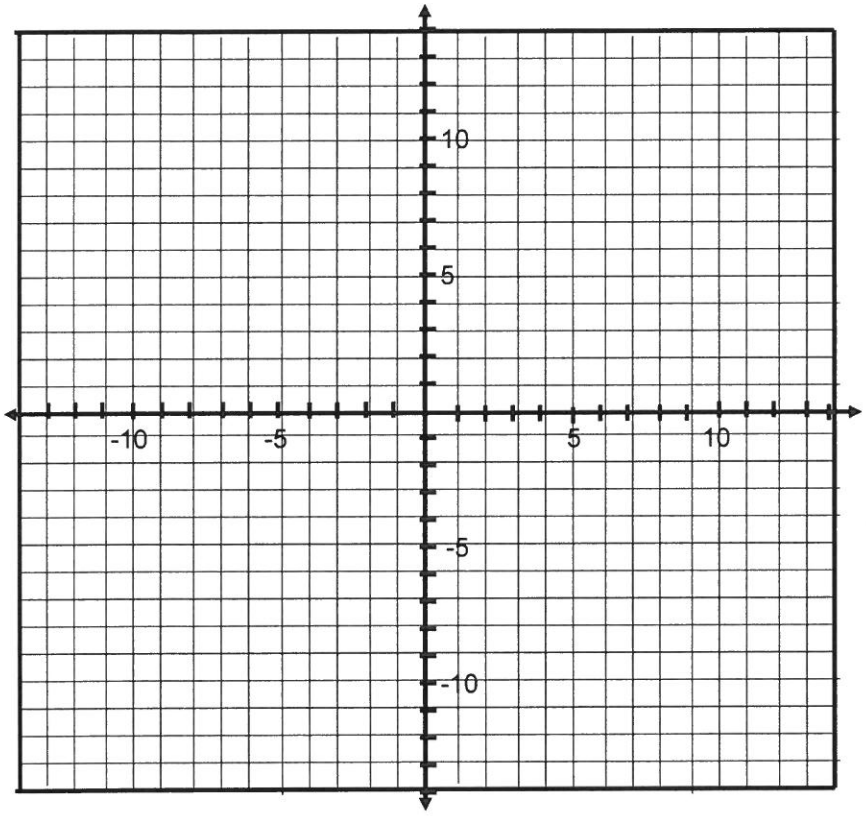
C. $\frac{6.8}{4.0} = \frac{y}{10.0}$

D. $\frac{y}{6.8} = \frac{10.0}{3.8}$

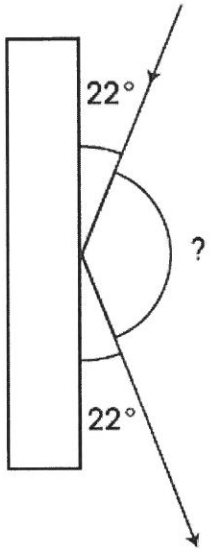
34. The vertices of Triangle I are (1, 3), (2, 1) and (5, 0). Triangle I is reflected across the *x*-axis, resulting in Triangle II. Triangle II is then rotated 180° about the origin, resulting in Triangle III.

In your **Answer Document**, draw and label Triangles I, II and III on the same coordinate plane.

Describe a single transformation that would map Triangle I directly onto Triangle III.



42. When a marble hits a wall, it bounces off the wall at the same angle it hits the wall.



If a marble hits a wall at a 22 degree angle, what is the measure of the angle between the two paths of the marble?

A. 44°

B. 68°

C. 136°

D. 158°