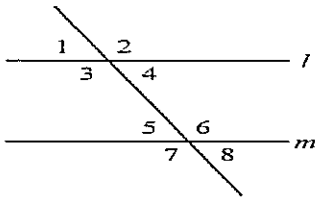


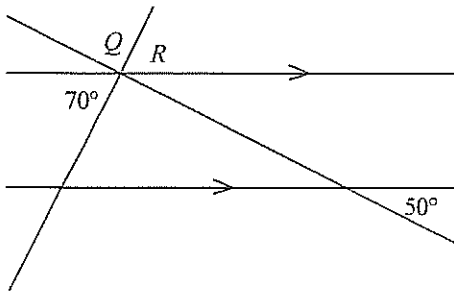
1. Find the value of  $x$  and *all the angle measures* if  $m \parallel l$ ,  $m\angle 1 = 2x + 44$  and  $m\angle 5 = 5x + 38$ .

$x =$  \_\_\_\_\_



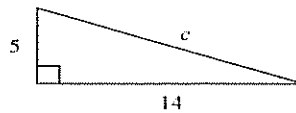
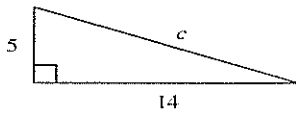
2. Find  $m\angle Q$ . The diagram is not to scale.

$m\angle Q =$  \_\_\_\_\_



3. Find the length of each missing side. If necessary, round to the nearest tenth.

$c =$  \_\_\_\_\_



4. Find the sum of the angles of a regular polygon with 45 sides.

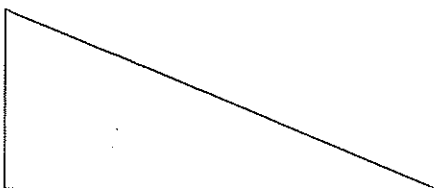
\_\_\_\_\_

5. Find the measure of each angle of a regular polygon with 19 sides.

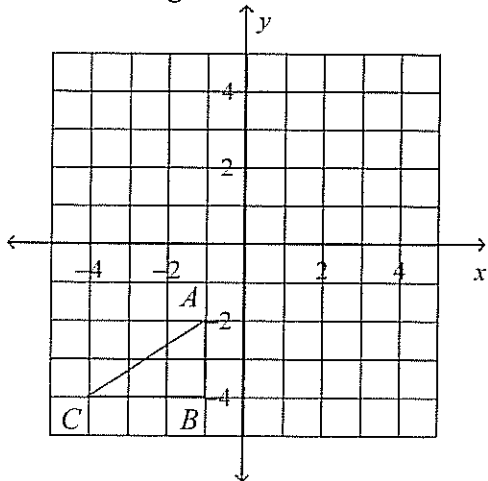
\_\_\_\_\_

6. A scuba diver has a taut rope connecting the dive boat to an anchor on the ocean floor. The rope is 140 feet long and the water is 40 feet deep. To the nearest tenth of a foot, how far is the anchor from a point directly below the boat?

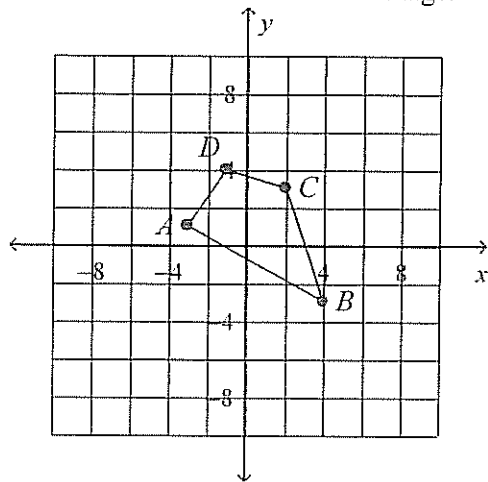
\_\_\_\_\_



7. Draw the image of  $\triangle ABC$  reflected in the  $x$ -axis. List the vertices of the new image. \_\_\_\_\_

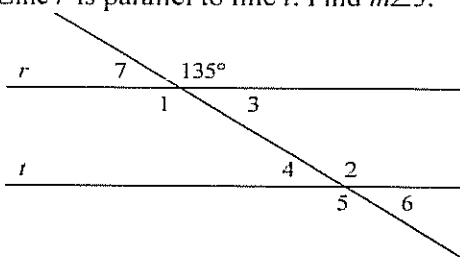


8. Find the image's vertices for a dilation with center  $(0, 0)$  and the given scale factor. scale factor = 4  
List the vertices of the new image. \_\_\_\_\_



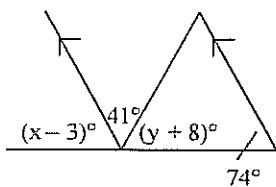
9. Line  $r$  is parallel to line  $t$ . Find  $m\angle 5$ .

$m\angle 5 =$  \_\_\_\_\_



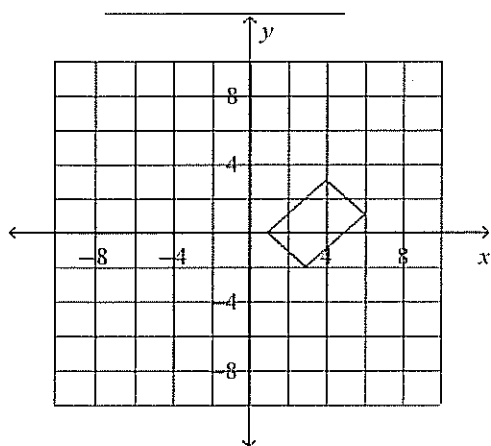
10. Find the values of  $x$  and  $y$ . Then find missing angle measures.

$x =$  \_\_\_\_\_  $y =$  \_\_\_\_\_ angles \_\_\_\_\_

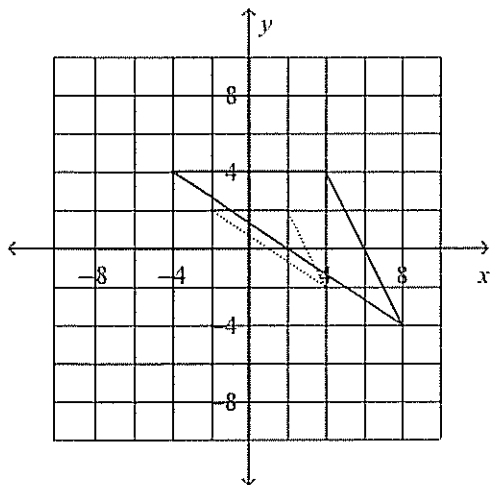


11. Given triangle ABC with vertices  $A(-5, -5)$ ,  $B(0, 7)$ ,  $C(1, 0)$ , determine the coordinates of the vertices after performing the **translation** indicated. List the vertices of the new image. \_\_\_\_\_  
**1 unit up and 7 units left**

12. Draw the image of the figure for the after a reflection across y-axis followed by a  $90^\circ$  counterclockwise **rotation** about the origin. List the vertices of the new image.



13. The dashed triangle is a **dilation** image of the solid triangle. What is the scale factor? \_\_\_\_\_



14. Find the distance between the point  $(-12, 5)$  and  $(10, -5)$  using Pythagorean theorem.