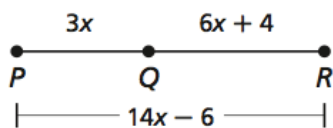


1. Q is between P and R. Find PR and PQ.



PR = 22

PQ = 6

2. E is the midpoint of segment DF. DE =  $9x$  and EF =  $4x + 10$ . Find DE, EF, and DF.

DE = 18

EF = 18

DF = 36

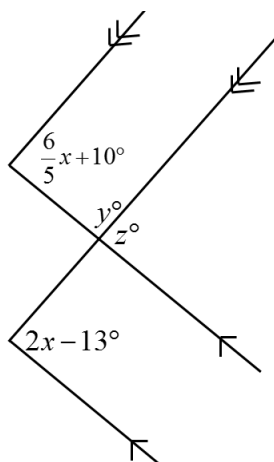
3.  $\overrightarrow{NP}$  bisects  $\angle MNQ$ ,  
 $m\angle MNP = (6x - 12)^\circ$ ,  
 and  $m\angle PNQ = (4x + 8)^\circ$ .  
 Find  $m\angle MNQ$ .

$m\angle MNQ =$  96

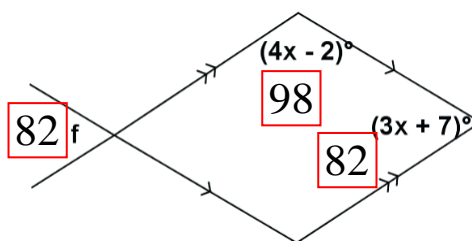
4.  
 $(x, y) \rightarrow (x - 2, y - 1)$

5. Find the value of x, y and z.

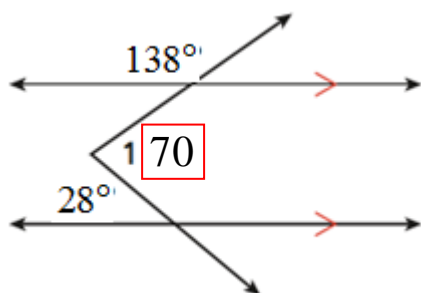
$x = 28.75$   
 $y = 135.5$   
 $z = 44.5$



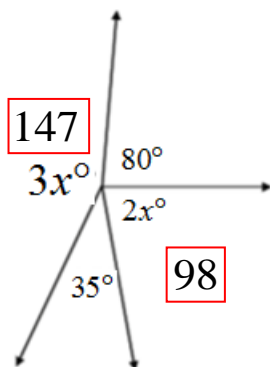
6. Solve for  $\angle f$  and each other angle that has information in it.



7. Find  $m\angle 1$



8. Find the measure of each missing angle

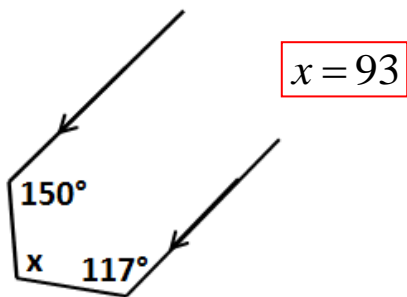


$x = 49$

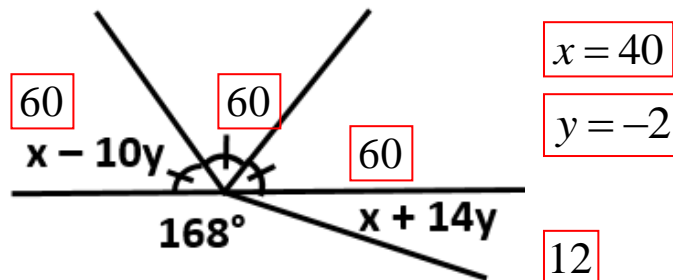
147

98

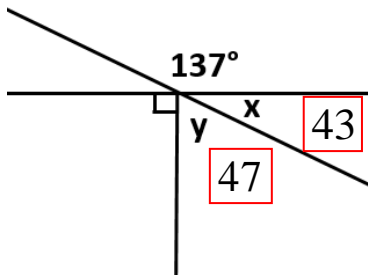
9. Find the value of x.



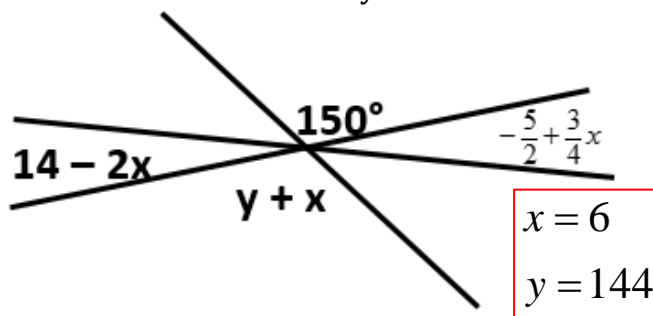
10. Find the value of x and y and each angle measure.



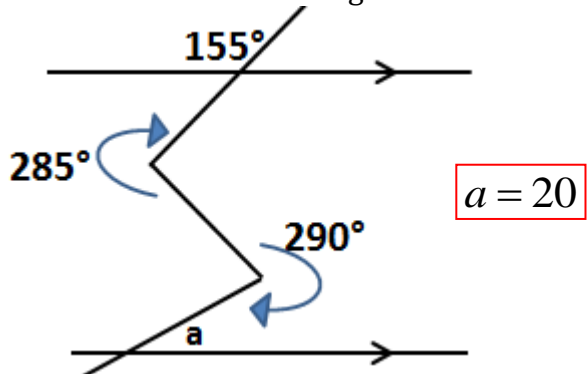
11. Find the value of x and y.



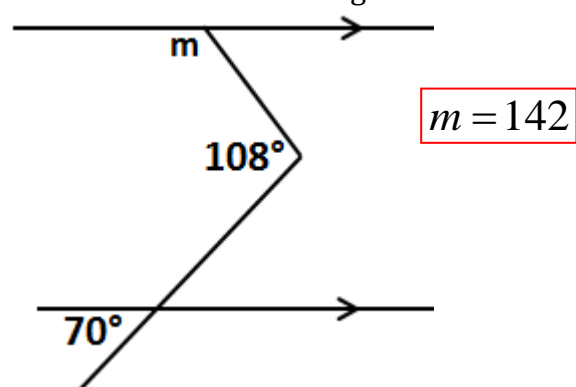
12. Find the value of x and y.



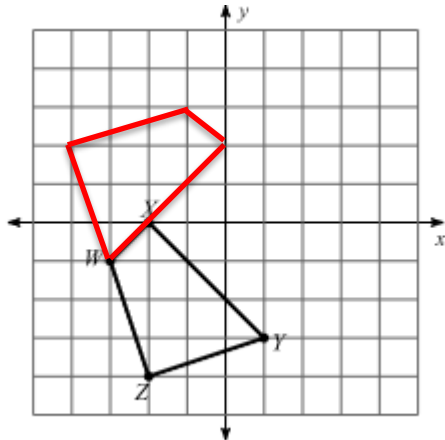
13. Find the measure of angle a.



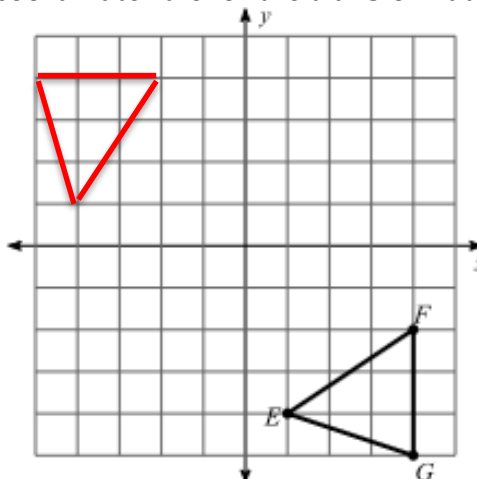
14. Find the measure of angle m.



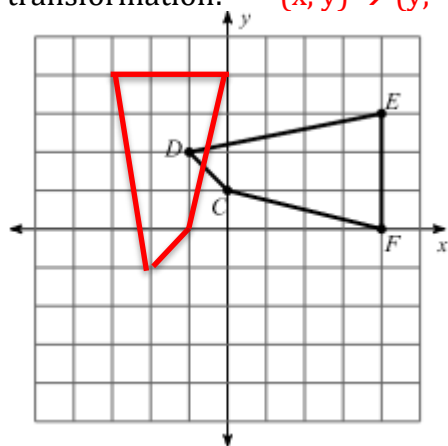
15. Rotate the figure 90° clockwise around the origin. Write the coordinate rule for the transformation:



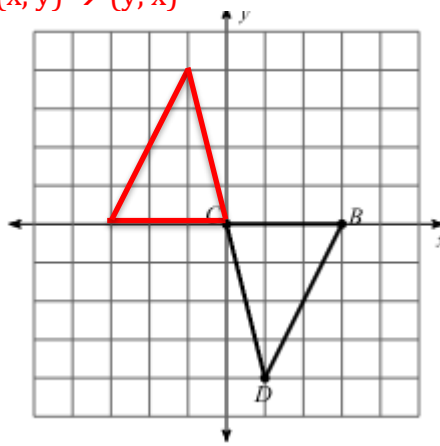
16. Reflect the figure over the line  $y = x$ . Write the coordinate rule for the transformation:



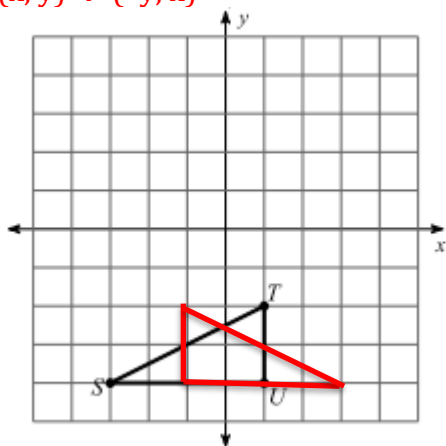
17. Rotate the figure  $90^\circ$  counterclockwise around the origin. Write the coordinate rule for the transformation:  
 $(x, y) \rightarrow (y, -x)$



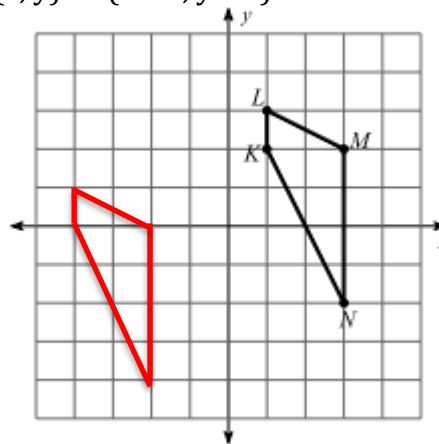
18. Rotate the figure  $180^\circ$  around the origin. Write the coordinate rule for the transformation:  
 $(x, y) \rightarrow (y, x)$



19. Reflect the figure over the y-axis. Write the coordinate rule for the transformation:  
 $(x, y) \rightarrow (-y, x)$



20. Apply the transformation:  
 $(x, y) \rightarrow (x - 5, y - 2)$



Constructions

21. Draw a  $65^\circ$  angle  
 - Label it  $\angle MPO$   
 - Use a compass to copy the angle to  $\angle M'P'O'$   
 - Bisect the original angle using a compass  
 - Mark any congruent parts

22. Draw segment  $AB = 14$  cm  
 - Create the perpendicular bisector of segment  $AB$  using a compass  
 - Label the midpoint as  $R$   
 - Mark any congruent parts on segment  $AB$ .

23. Use your compass to construct an equilateral triangle.  
 - Mark any congruent parts.  
  
 Give specific instructions that would tell someone else how to create an equilateral triangle.