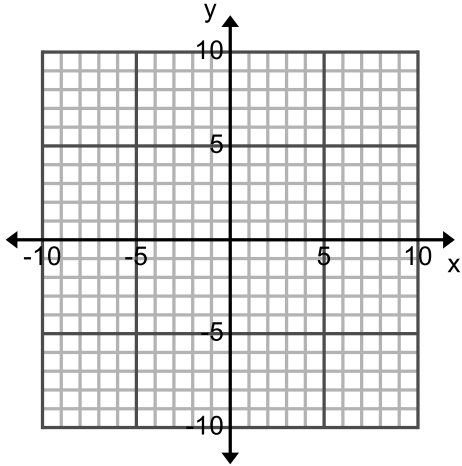


Find the coordinates of the transformation.

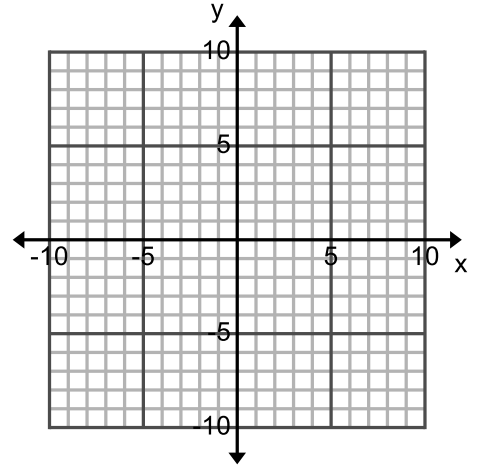
1. $A(1,3)$ reflected in the y -axis.



2.

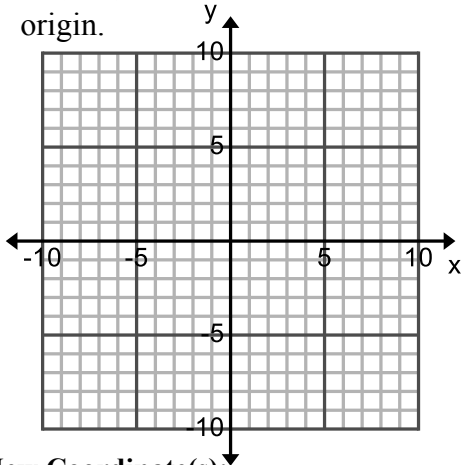
New Coordinate(s): _____

- $D(5,2)$ reflected is the x -axis.



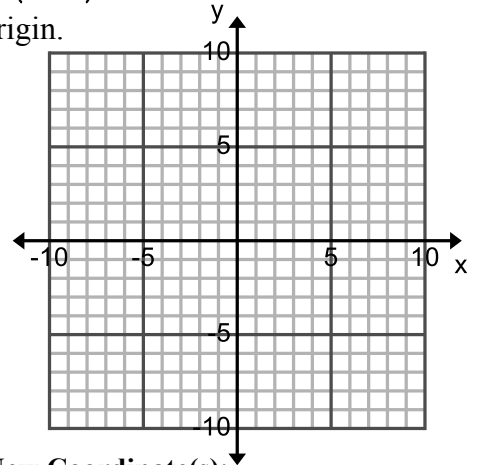
New Coordinate(s): _____

3. $E(1,2)$ rotated 90° clockwise about the origin.



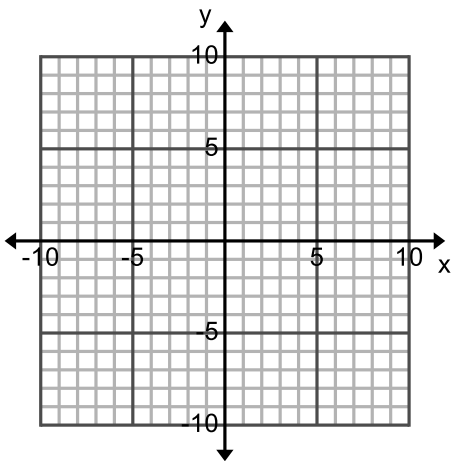
New Coordinate(s): _____

4. $F(4,-1)$ rotated 180° clockwise about the origin.



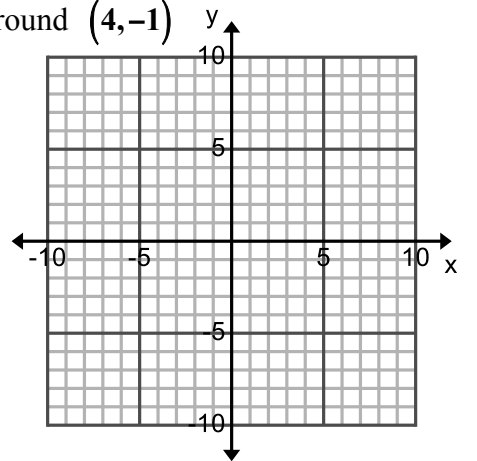
New Coordinate(s): _____

5. $G(-4,9)$ reflected in the line $y = x$.



New Coordinate(s): _____

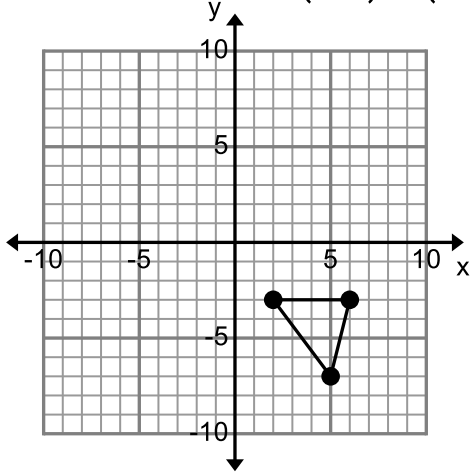
6. $G(-3,7)$ rotated 90° counterclockwise around $(4,-1)$



New Coordinate(s): _____

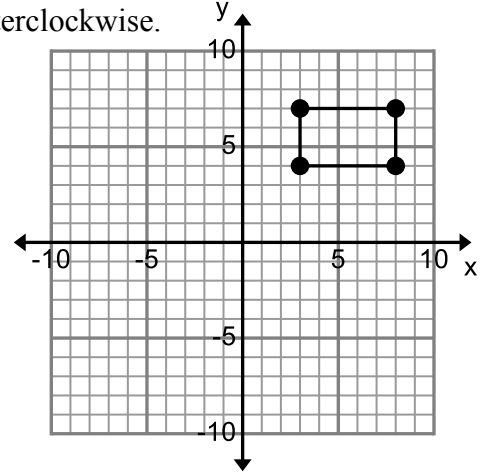
Transform each given geometric figure on the coordinate plane as described. Write the new coordinates.

7. Translate $\triangle EFG$ using $(x, y) \rightarrow (x, y + 8)$



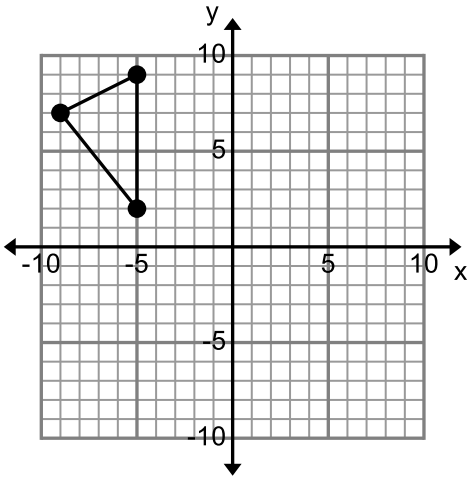
New Coordinates: _____

8. Rotate $HJKL$ about the origin 90° counterclockwise.



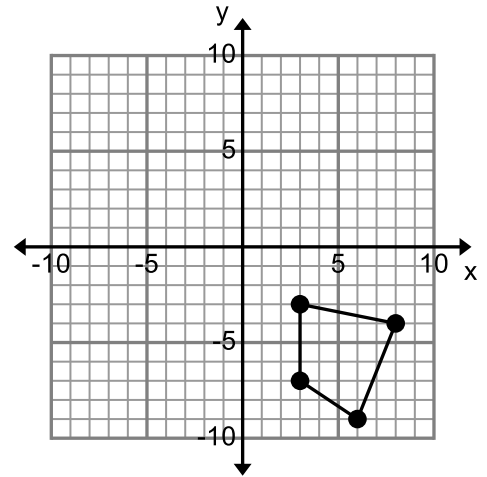
New Coordinates: _____

9. Reflect $\triangle ABC$ over the y-axis.



New Coordinates: _____

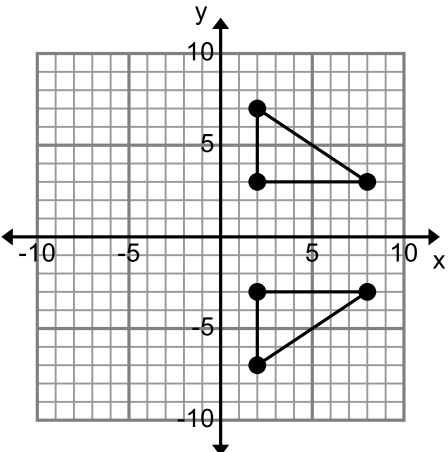
10. Reflect $MNOP$ over the line $y = x$.



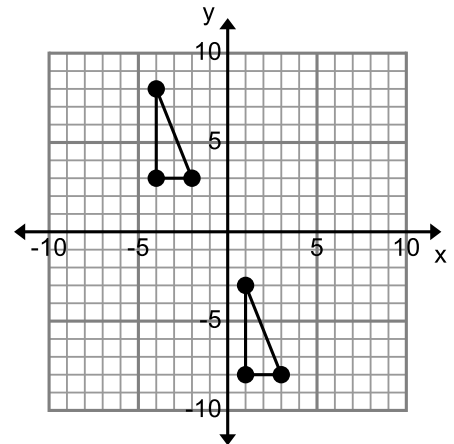
New Coordinates: _____

Identify the transformation used to create $\triangle XYZ$ on each coordinate plane.

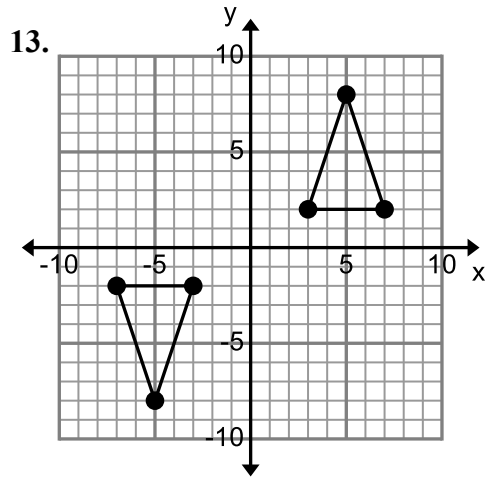
11.

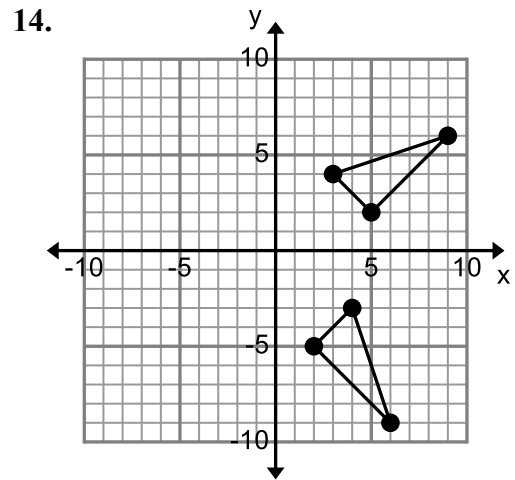


12.



Identify the transformation used to create the new triangle on each coordinate plane.

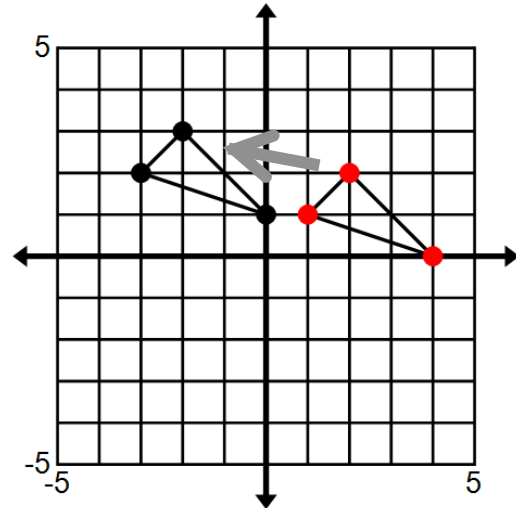




15. Identify and describe the transformation

Identify _____

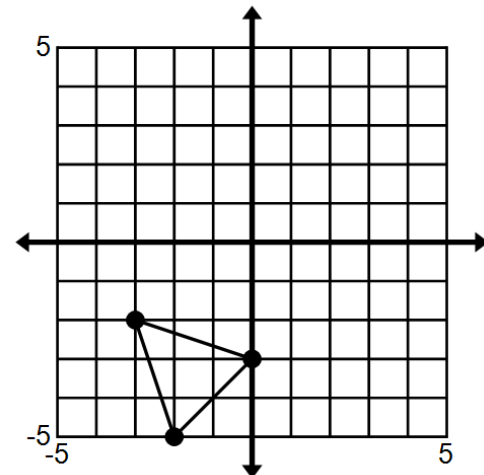
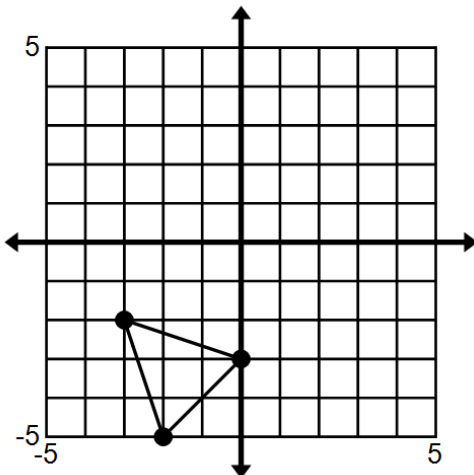
Details: _____



State the vertices of the image after the transformation.

16. Reflect the triangle across the line $y = -1$

17. Reflect the triangle across the line $x = -1$

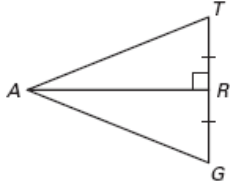


New Coordinates: _____

New Coordinates: _____

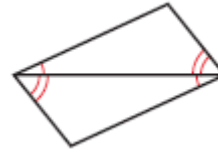
A. Decide whether enough information is given to prove that the triangles are congruent.
B. If there IS enough information, state the congruence postulate or theorem you would use.

18.



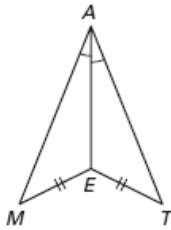
A. Yes or No
 B. If Yes, _____

23.



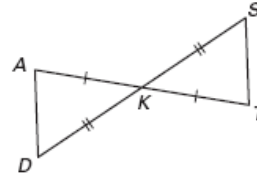
A. Yes or No
 B. If Yes, _____

19.



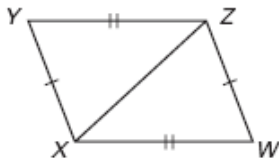
A. Yes or No
 B. If Yes, _____

24.



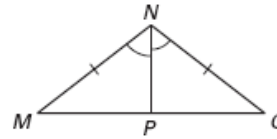
A. Yes or No
 B. If Yes, _____

20.



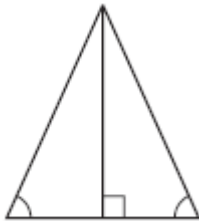
A. Yes or No
 B. If Yes, _____

25.



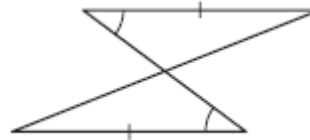
A. Yes or No
 B. If Yes, _____

21.



A. Yes or No
 B. If Yes, _____

26.



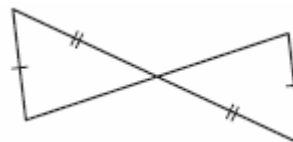
A. Yes or No
 B. If Yes, _____

22.



A. Yes or No
 B. If Yes, _____

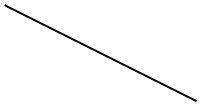
27.



A. Yes or No
 B. If Yes, _____

Construct a separate line segment twice as long as the given line segments. Start your new segments at point X.

28.



X •

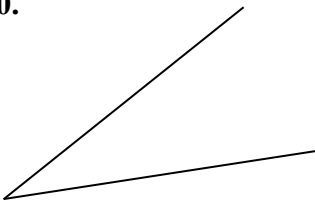
29.



X •

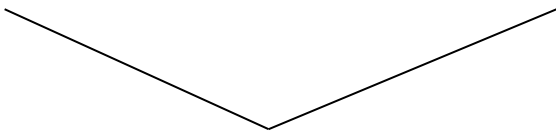
Copy each angle to form a congruent angle. Make point X be the vertex of your new angle.

30.



X •

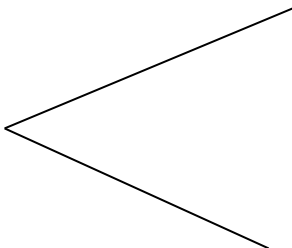
31.



X •

Bisect the angle

32.



Create a perpendicular bisector of the lines to find the midpoint. Clearly mark the midpoint with a dot and letter

33.



34.

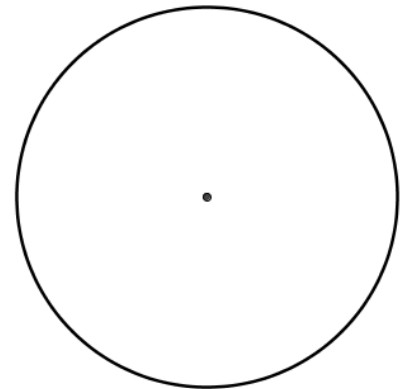
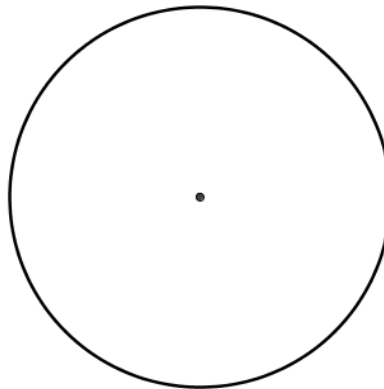
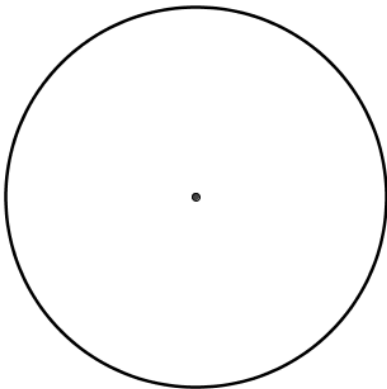


Inscribe the shape inside the given circle.

35. Equilateral Triangle

36. Regular Hexagon

37. Square



If two people were to be given the following pieces of information, would they both HAVE to make the same triangle? Or could they make two different triangles? Draw a picture and tell how you know.

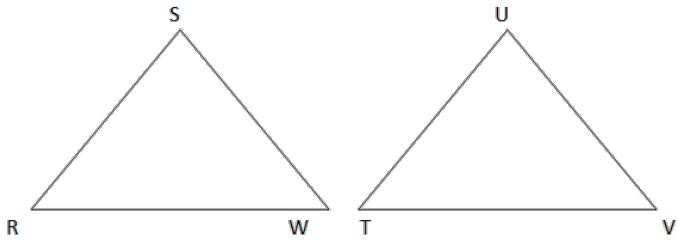
38. $m\angle F = 90^\circ$, $\overline{DE} = 14 \text{ in.}$, $\overline{EF} = 6 \text{ in.}$

39. $m\angle J = 32^\circ$, $m\angle K = 45^\circ$, $\overline{KL} = 5 \text{ units}$

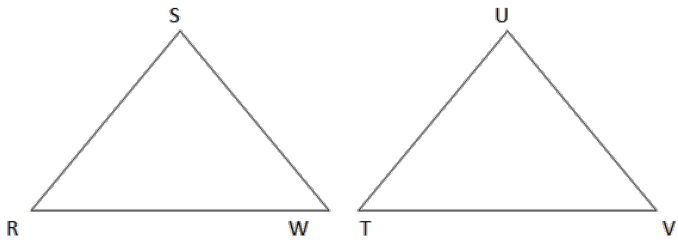
40. $m\angle X = 47^\circ$, $\overline{ZX} = 7 \text{ ft.}$, $\overline{YX} = 12 \text{ ft.}$

Add the necessary markings to prove each set of triangles congruent by the given congruence postulate or theorem.

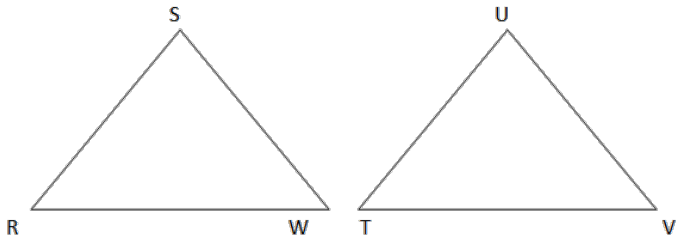
41. SAS



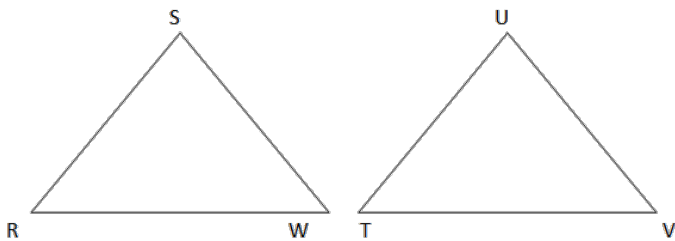
42. SSS



43. ASA



44. AAS



45. HL

