**Unit 1: Basic Terms, Constructions, & Transformations**

**Assignments**

**NOTE: You should be prepared for daily quizzes.**

|  |  |  |
| --- | --- | --- |
| **Day** | **Date** | **Assignment** (Due the next class meeting) |
| Monday  Tuesday | 8/12/13 (A)  8/13/13 (B) | *Pay Lab Fee $4*  *Bring tissue*  Notes: 1.1  **HW: 1.1 Worksheet** |
| Wednesday  Thursday | 8/14/13 (A)  8/15/13 (B) | *Did you turn in your syllabus and pay your lab fee?*  Notes: 1.2  **HW: 1.2 Worksheets** |
| Friday Monday | 8/16/13 (A)  8/19/13 (B) | *Did you turn in your syllabus and pay your lab fee?*  Notes: 1.3  **HW: 1.3 Worksheet** |
| Tuesday  Wednesday | 8/20/13 (A)  8/21/13 (B) | *Did you turn in your syllabus and pay your lab fee?*  Notes: 1.4  **HW: 1.4 Worksheet** |
| Thursday  Friday | 8/22/13 (A)  8/23/13 (B) | *Did you turn in your syllabus and pay your lab fee?*  Notes: 1.5  **HW: 1.5 Worksheet** |
| Monday  Tuesday | 8/26/12 (A)  8/27/12(B) | *Did you turn in your syllabus and pay your lab fee?*  Notes: 1.6 (*If needed*)  **HW: Unit 1 Practice Test** |
| Wednesday  Thursday | 8/28/13 (A)  8/29/13 (B) | ***UNIT 1 TEST*** |

HW reminders:

* If you cannot solve a problem, get help **before** the assignment is due.
* Help is available before school, during lunch, or during IC.
* For extra practice, visit [www.interactmath.com](http://www.interactmath.com)

** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1.1 Homework**

**Use the figure at the right to name examples of each term**.

1. Three points 2. Two lines

3. Three Rays 4. Three segments

5. Point that is not on 6. Line that does not contain point E

7. Ray with point as its 8. Segment with point and F as

endpoint. its endpoints

9. Three collinear points 10. Three non-collinear points

**Refer to the figure below to answer questions #11-14**.

 11. Name the intersection of plane and plane

12. Name the intersection of plane and plane

13. Name two planes that intersect in .

14. Name two planes that intersect in .

**Determine whether the following statements are true or false.**

15. If two lines intersect in a point, then the point is in both lines. \_\_\_\_\_\_\_\_\_\_\_

16. More than one line can be drawn through two points. \_\_\_\_\_\_\_\_\_\_\_

17. Two planes can intersect in a line. \_\_\_\_\_\_\_\_\_\_\_

18. Two points determine two lines. \_\_\_\_\_\_\_\_\_\_\_

19. Three non-collinear points determine a plane. \_\_\_\_\_\_\_\_\_\_\_

20. If two planes intersect in a line, then the line is in both planes. \_\_\_\_\_\_\_\_\_\_\_

21. It is possible for two lines to line in the same plane. \_\_\_\_\_\_\_\_\_\_\_



A

C

E

G

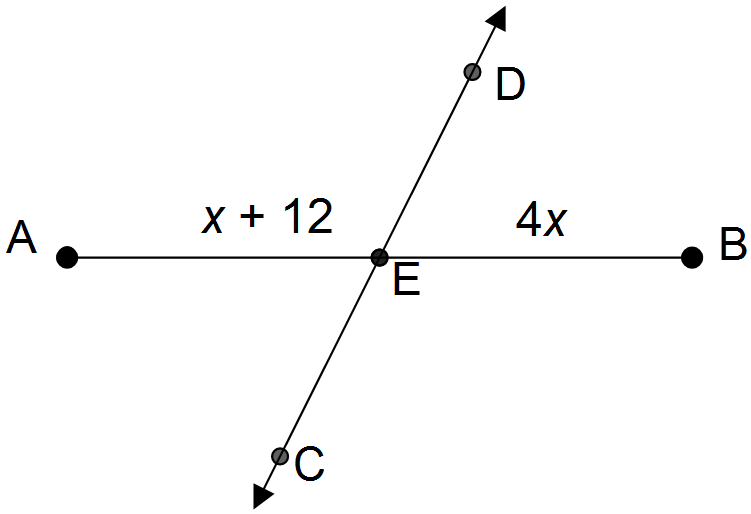
I

K

***For #22-23, use the line to find each measure.***

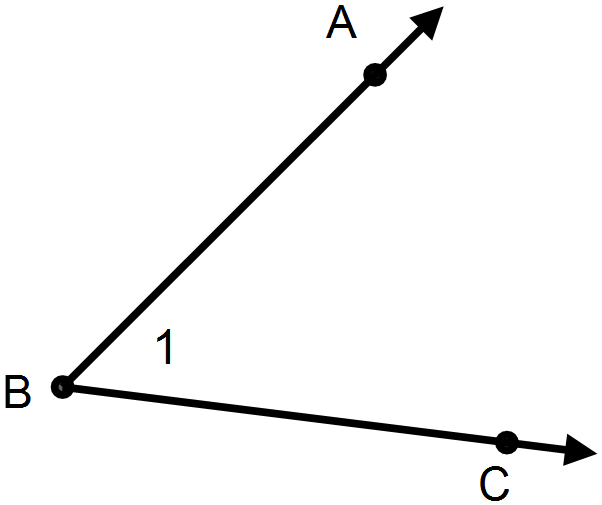
22. If AC = 10 and CG = 21, find AG. 23. If AI = 72 and GI = 11, find AG.

***For #24-25, use the figure at the right.***



24. Find the value of .

25. Find the measure of .



26. Name this angle in as many ways as you can.

(using letters, numbers, etc.)

***Use the diagram below to answer questions #27-29.***

27. If , does bisect ?



28. If bisects, find the measure of .

29. If bisects, find the measure of .

30. bisects ∠. If and , find the value of x. (Draw a

picture)

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1.2 Homework**

***#1-2: Construct a line segment with the same length as each given line segment.***

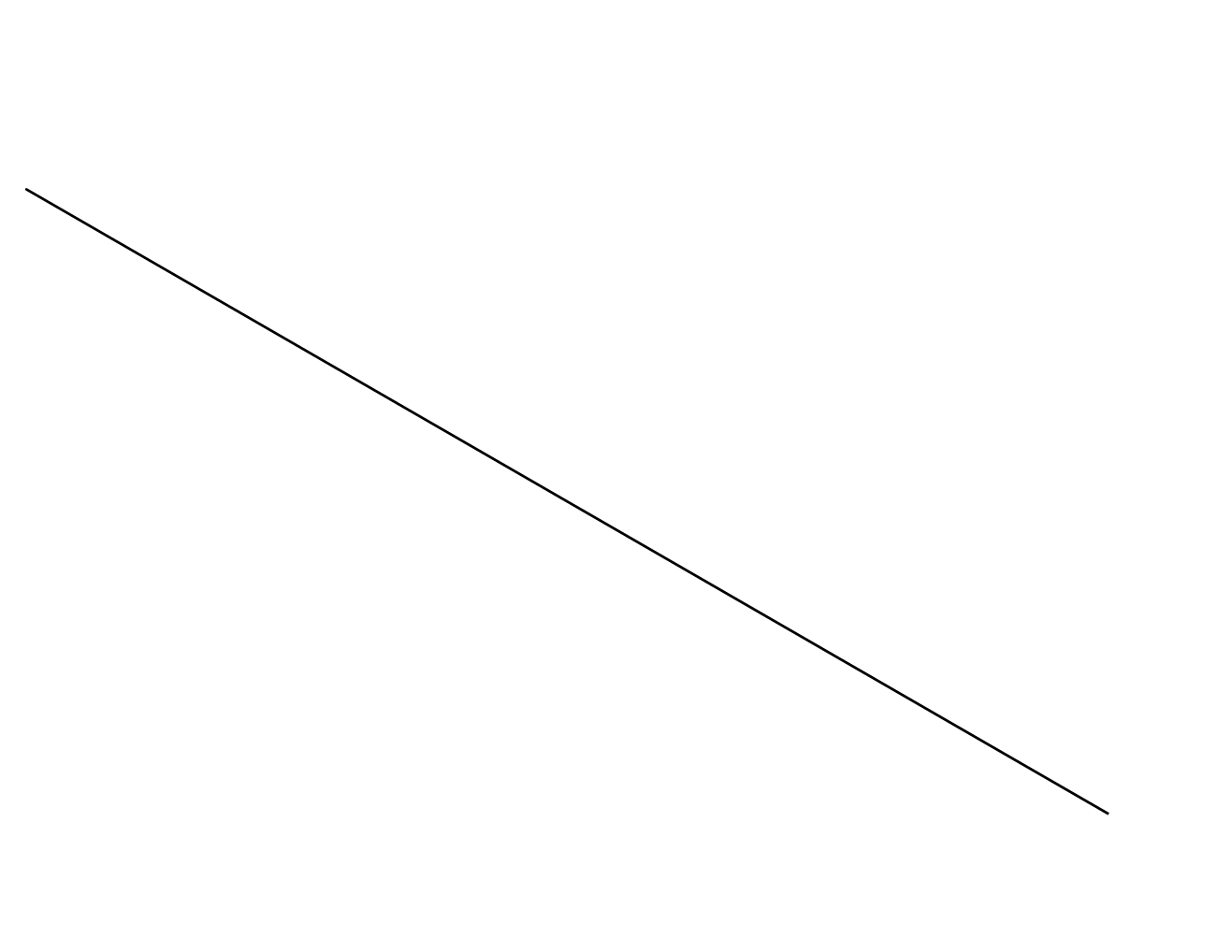
1. 2.

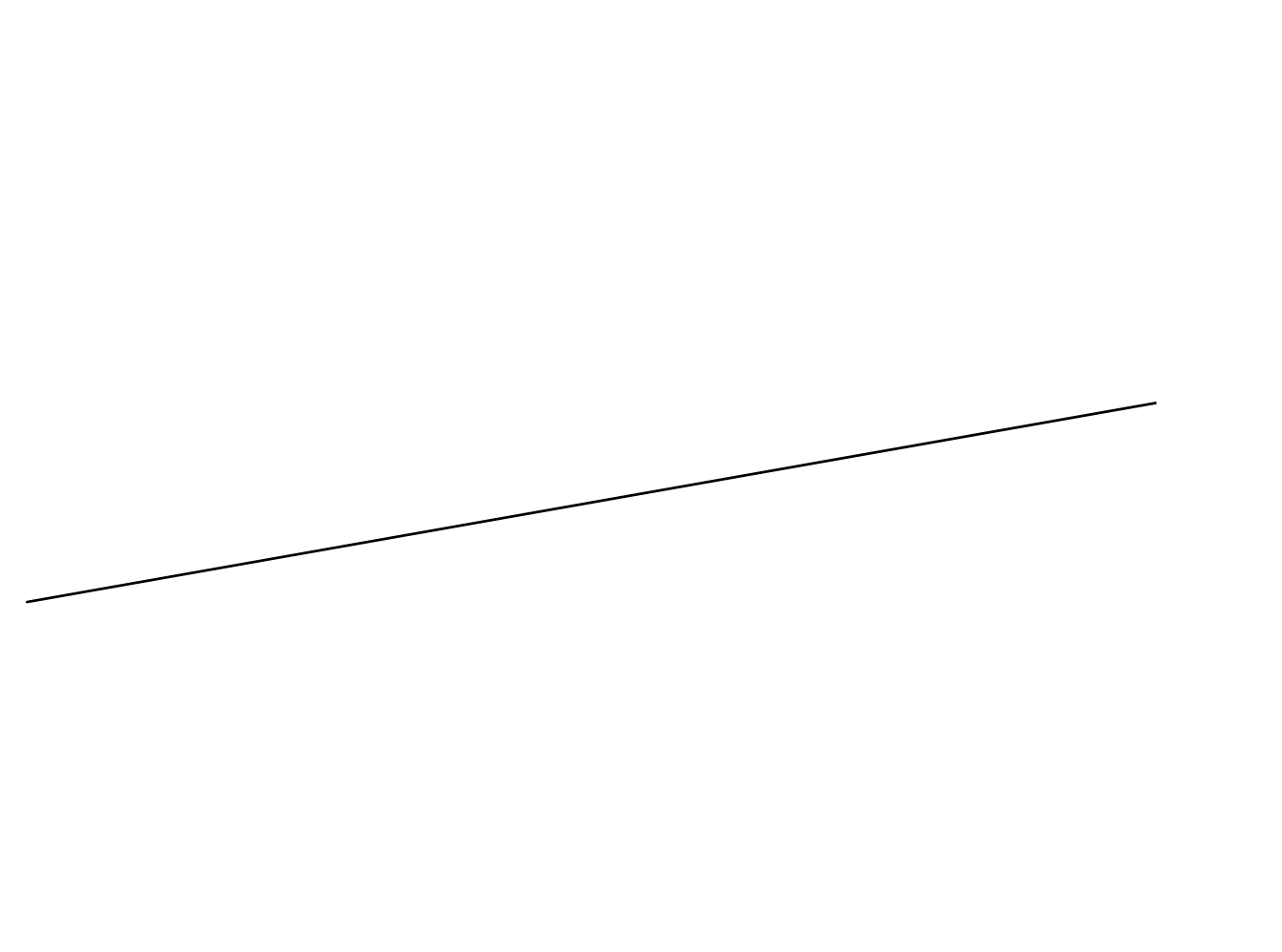




***#3-4: Construct a bisector for each given line segment.***

3. 4.

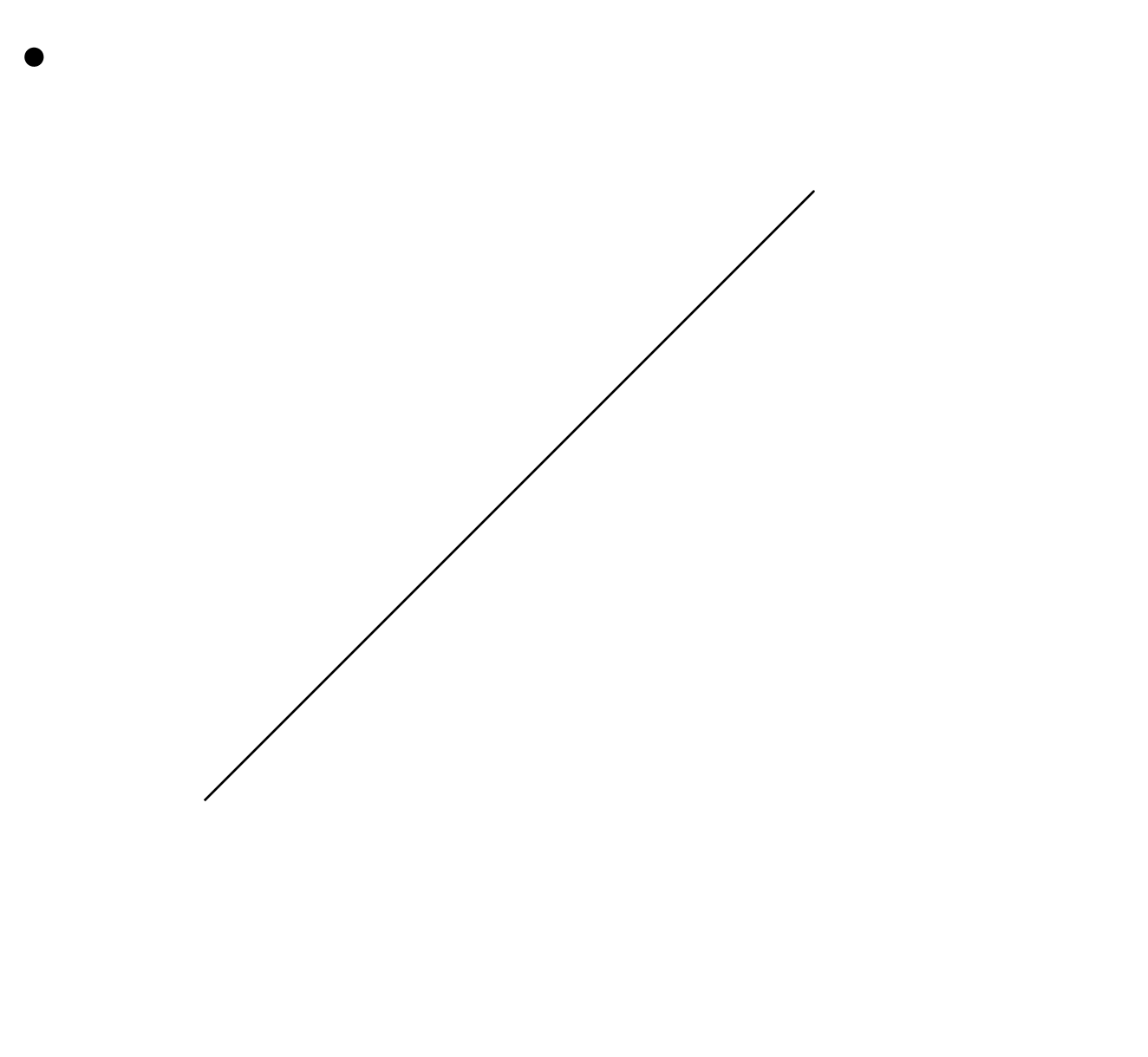




***#5-6: Construct a line that is perpendicular to the give line, passing through the given point.***

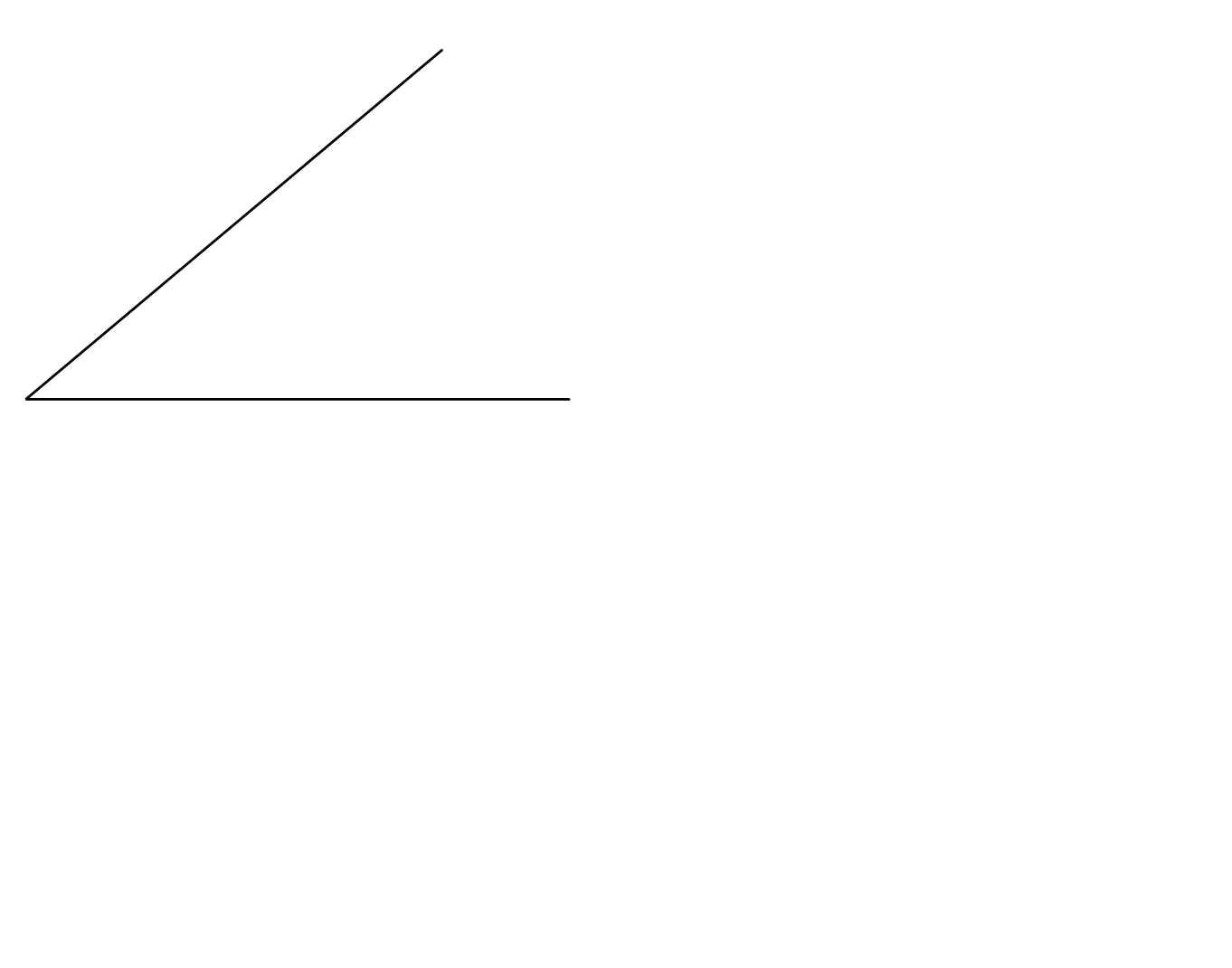
5. 6.

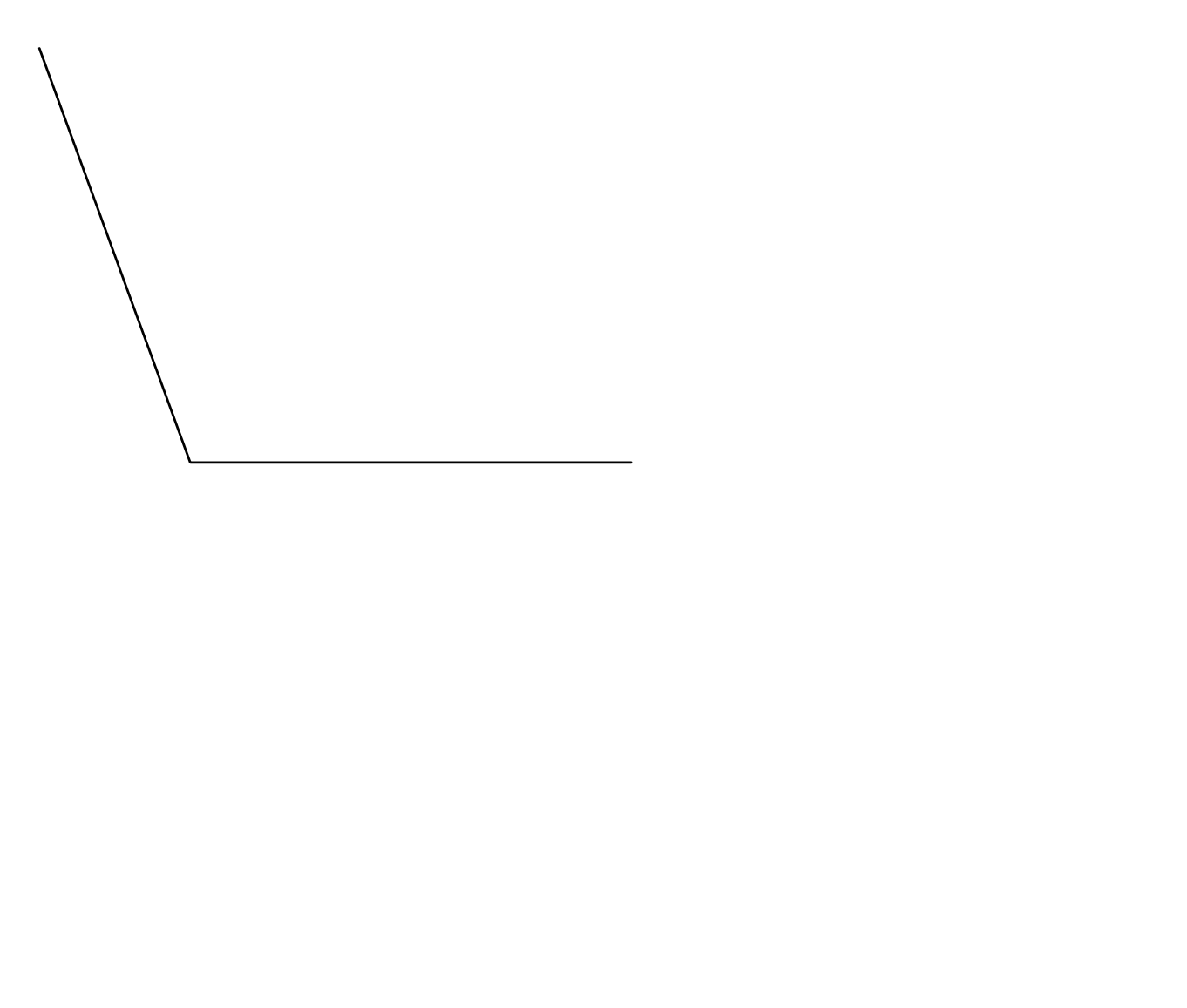




***#7-8: Construct a copy of each given angle.***

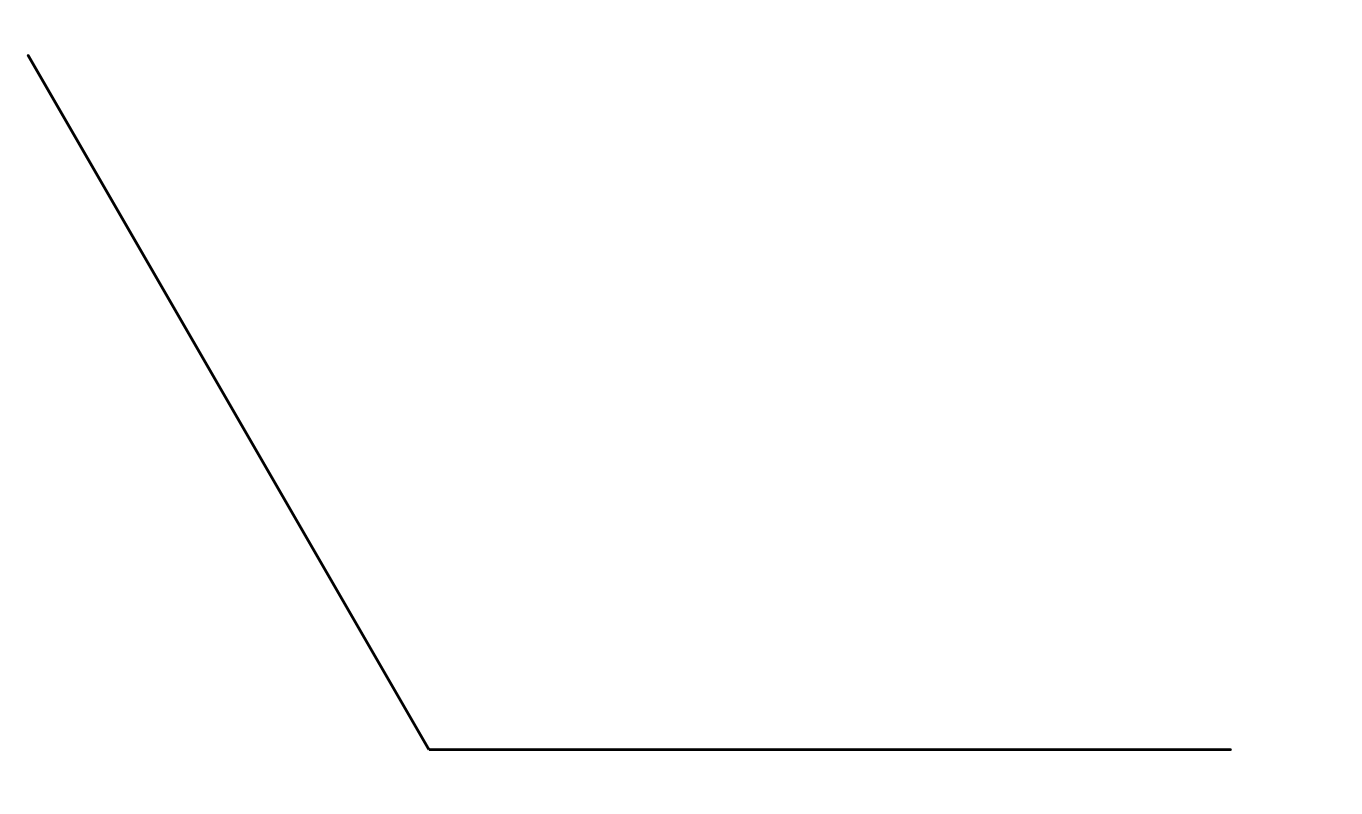
7. 8.

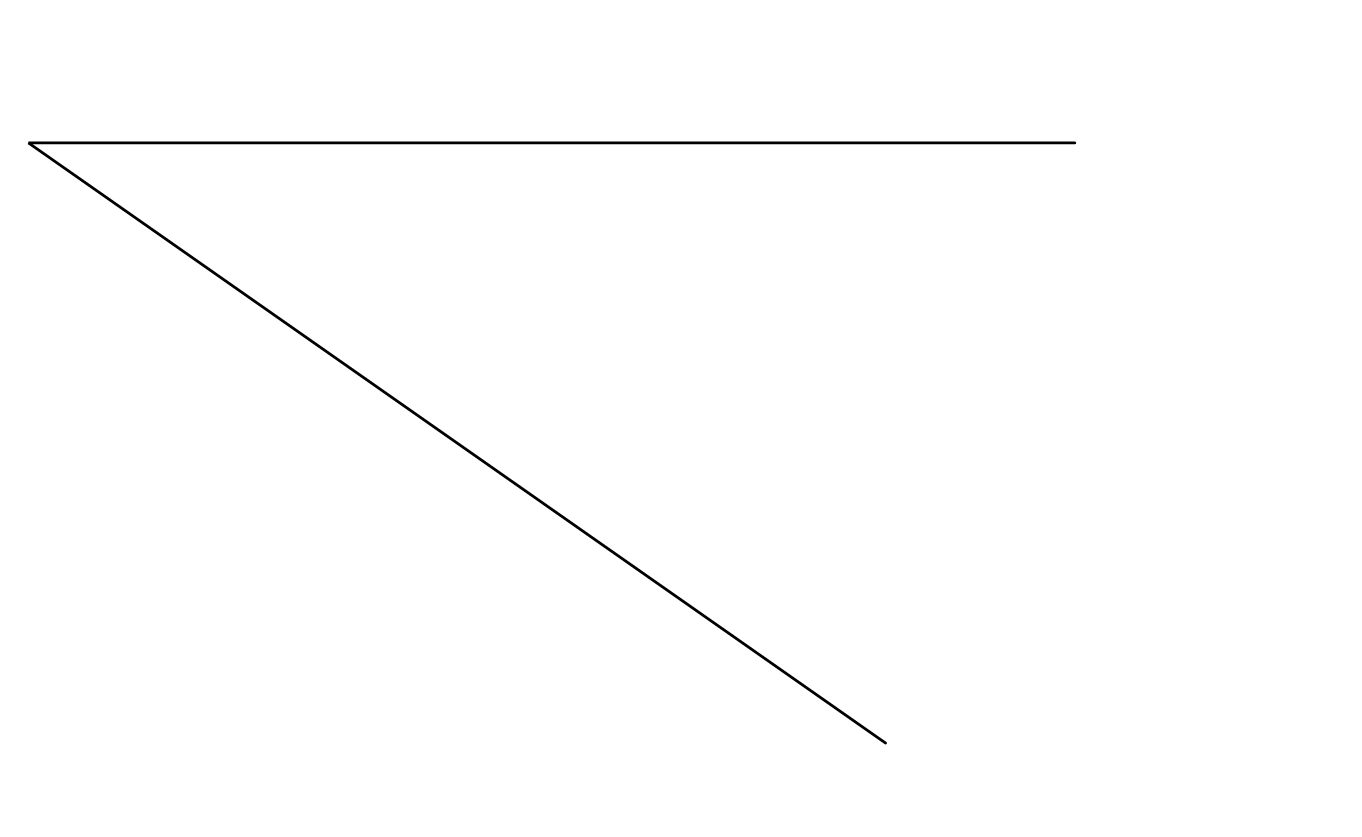




***#9-10: Construct a bisector of each angle.***

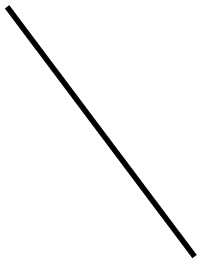
9. 10.





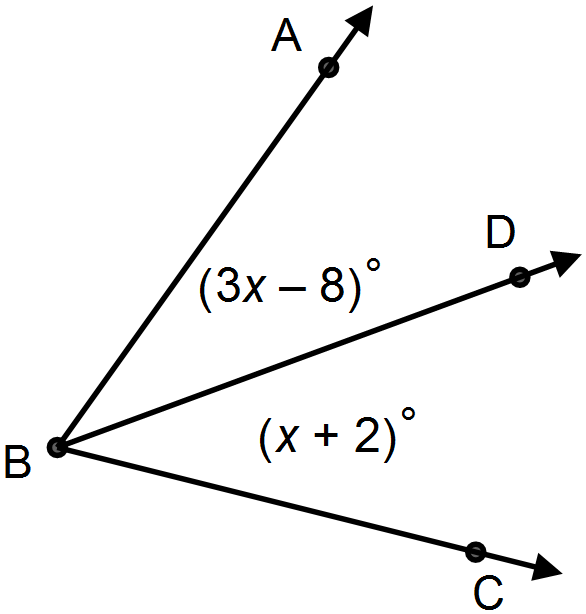
***#11-12: Construct a circle with the given radius.***

11. 12.





***REVIEW***



13. bisects

a. Find the value of .

b. Find the .

***Use the diagram to answer #14-16.***



14. Three non-collinear points

15. Name in another way.

16. are coplanar? (True/False)

17. Find the length of (Hint: First solve for *x*).



Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1.3 Homework**

***For #1 – 2: Find the image of each ordered pair after the translation (x, y) (x + 5, y – 7).***

1. 2.

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

***For #3 – 4: Give the pre-image for each image and translation listed below.***

3. Image: *G’(-2,6)* when 4. Image: *H’(1,-2)* when

(*x*, *y*) 🡪 (*x* – 3 , *y* + 11) (*x*, *y*) 🡪 (*x* + 4, *y* +8)

\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

5. Segment has coordinates) and . Graph the pre-image, then use the transformation of (*x*, *y*) 🡪 (*x* – 2, *y* + 7) to find the image of the segment. Draw both segments on the graph.

\_\_\_\_\_\_\_\_\_\_

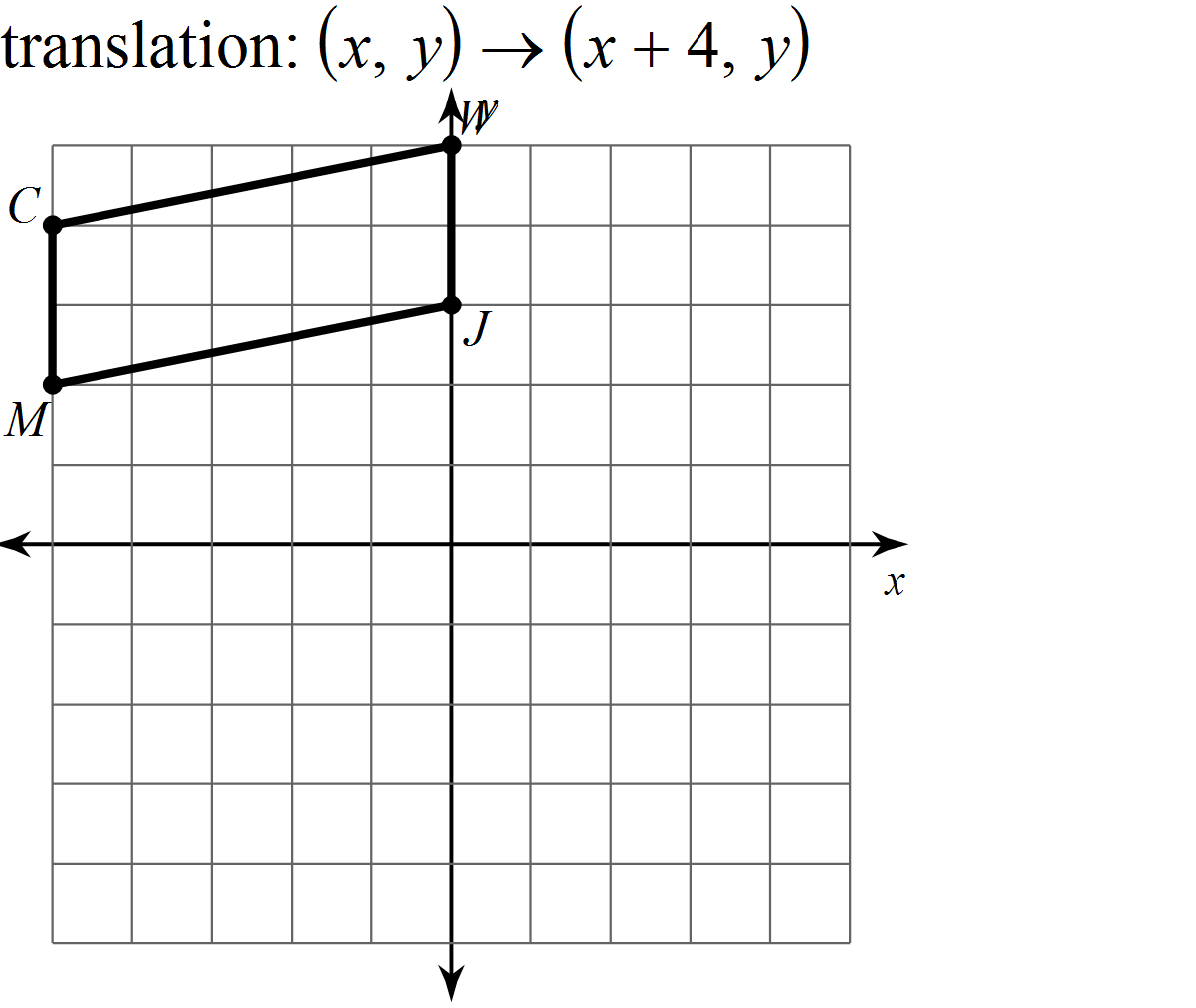
\_\_\_\_\_\_\_\_\_\_

6. A rigid motion does not change the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a figure.

7. Which figures below are examples of rigid motion transformations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| a) | b) |
| c) | d) |

***#8-9: Find the coordinates of each vertex after the given translation. Then graph the translation.***

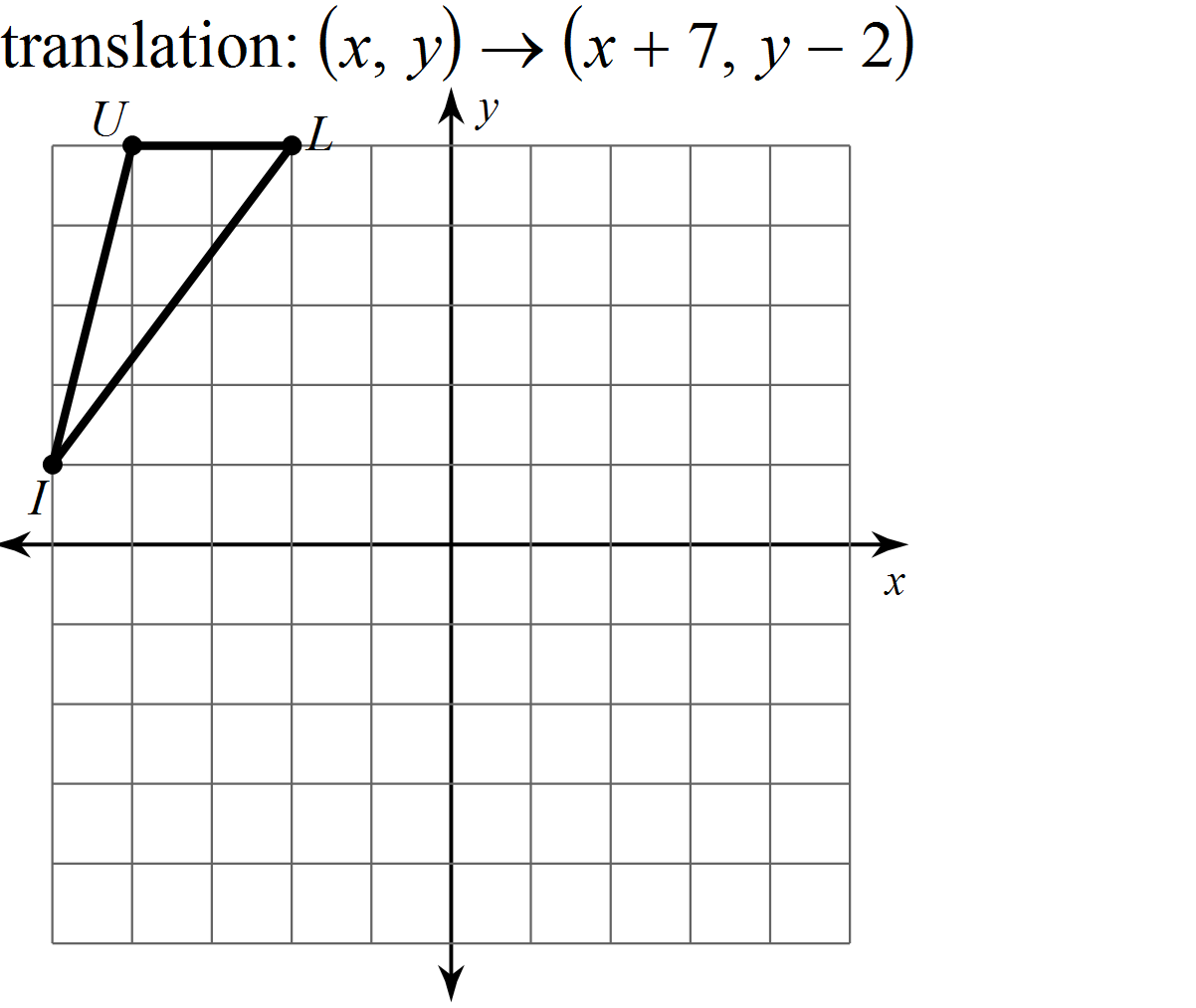


8. \_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_



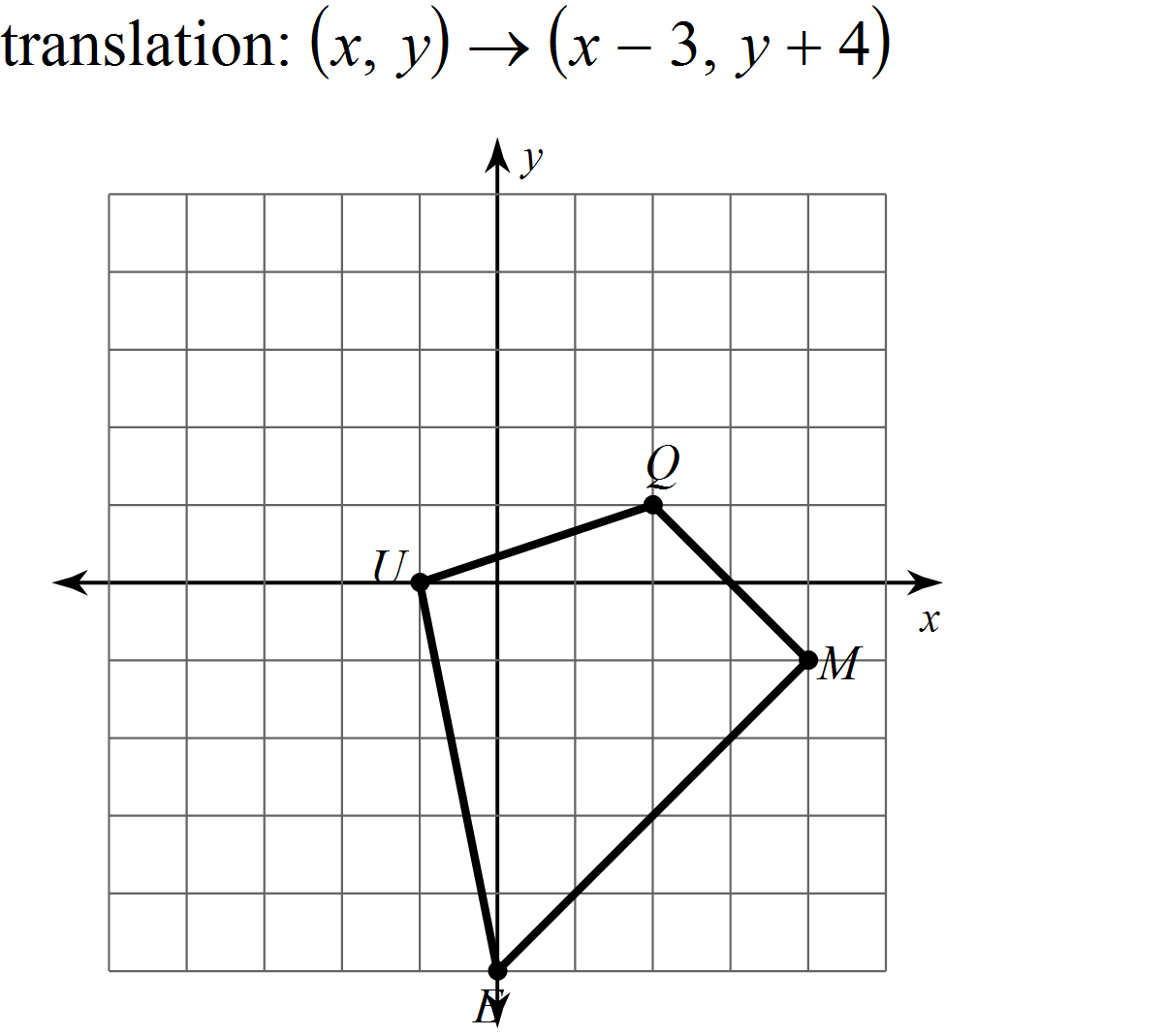
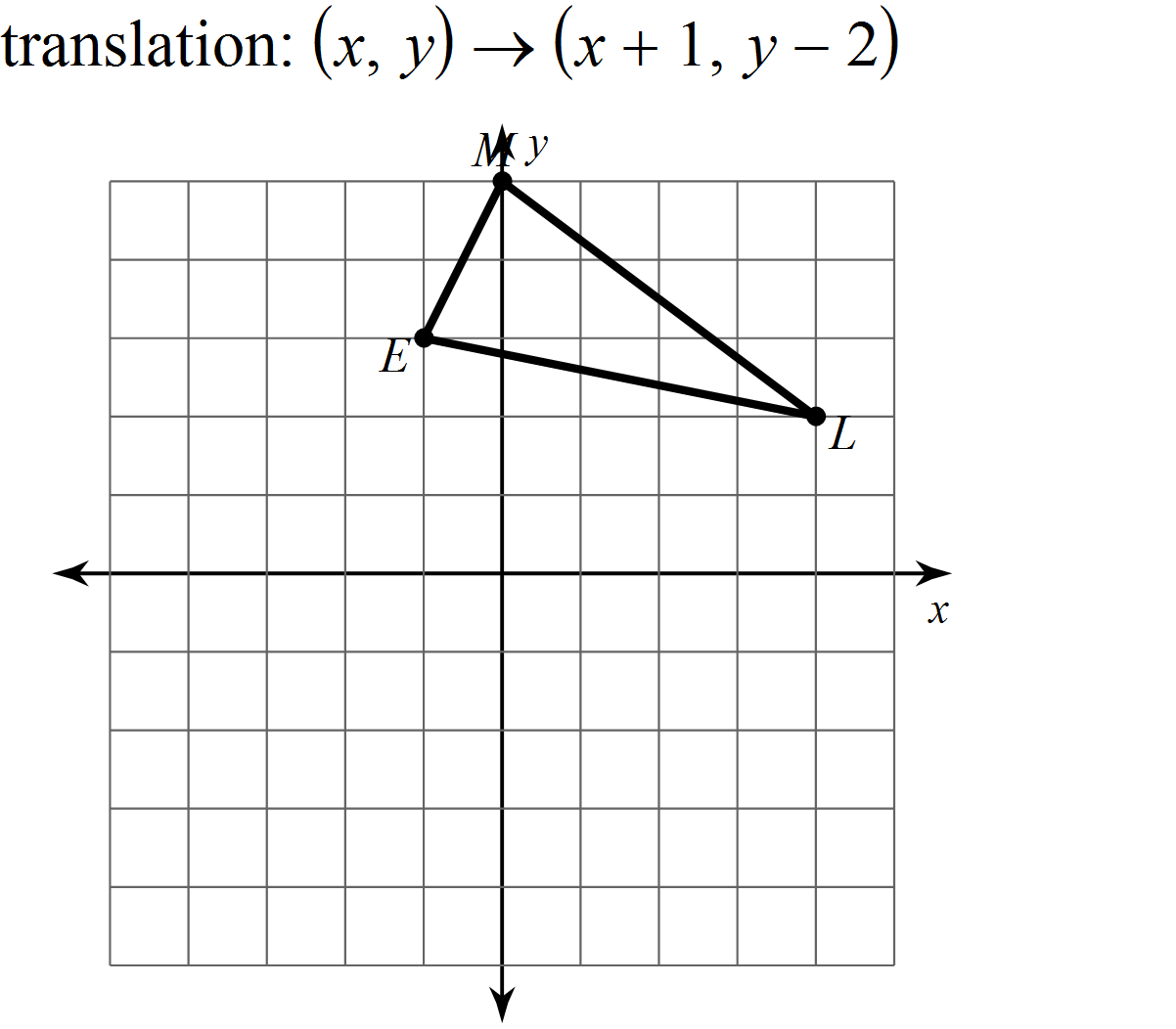
9. \_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_

***#10-11: Graph each transformation.***

10. 11.

***REVIEW***

***Solve each equation.***

12. 13. 14.

15. Point is between points on . Find the value of & the length of if

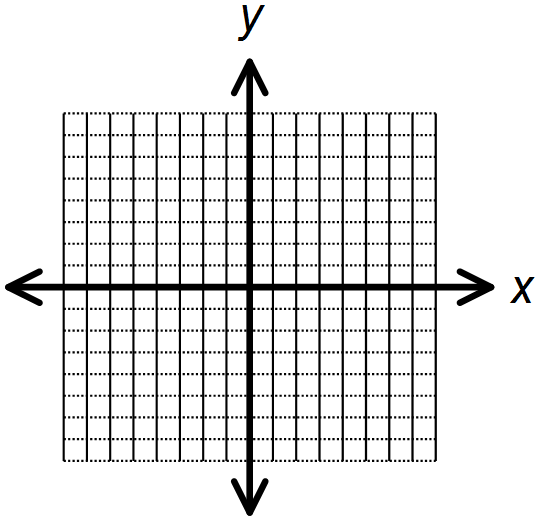
.

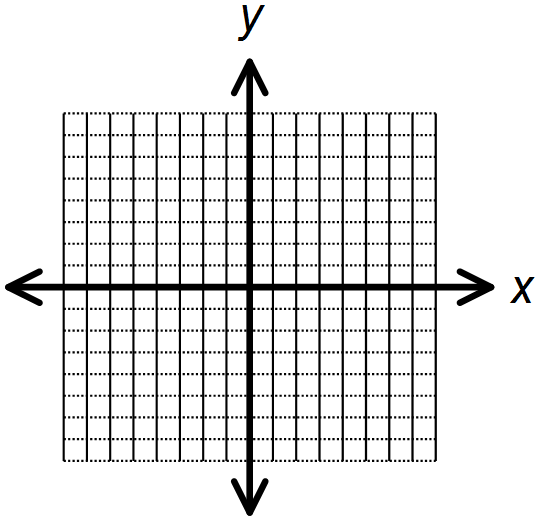
Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

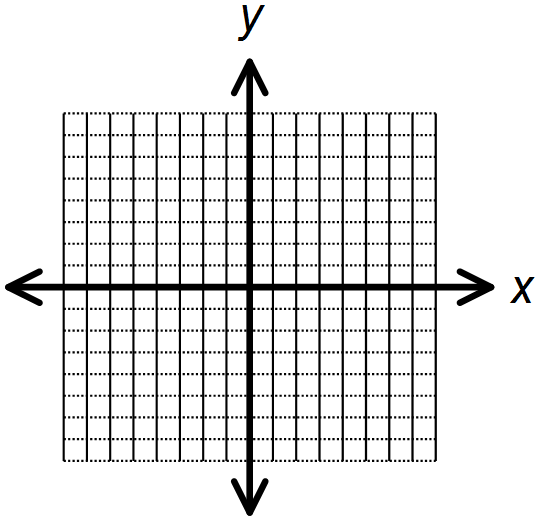
**1.4 Homework**

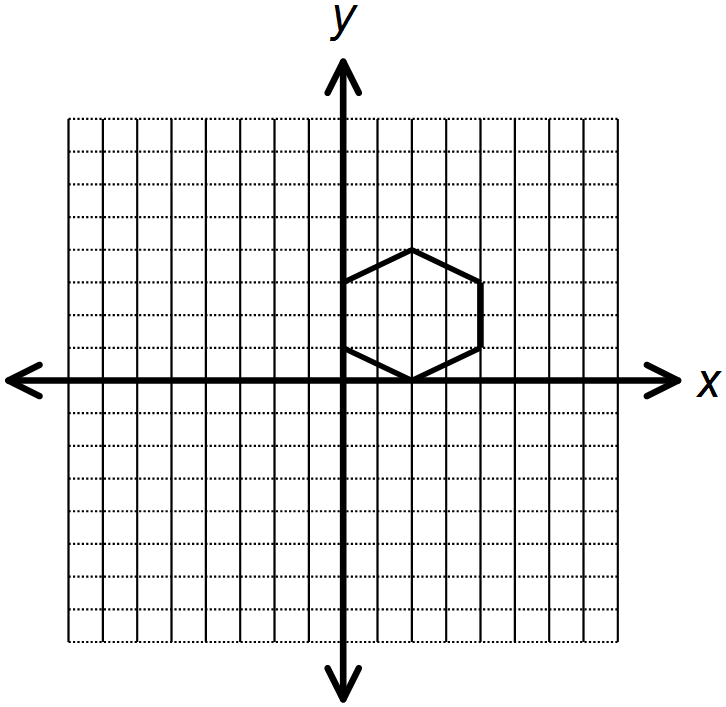
***Give the image of each point after a reflection across the given line. Use the graphs below to help you find the image points.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1.; x-axis |  | 2.; y-axis |  | 3.; |
|  |  |  |  |  |
| 4; |  | 5. |  | 6; |
|  |  |  |  |  |









7. As the first step in designing a logo, you draw the figure

shown in the first quadrant of the coordinate plane.

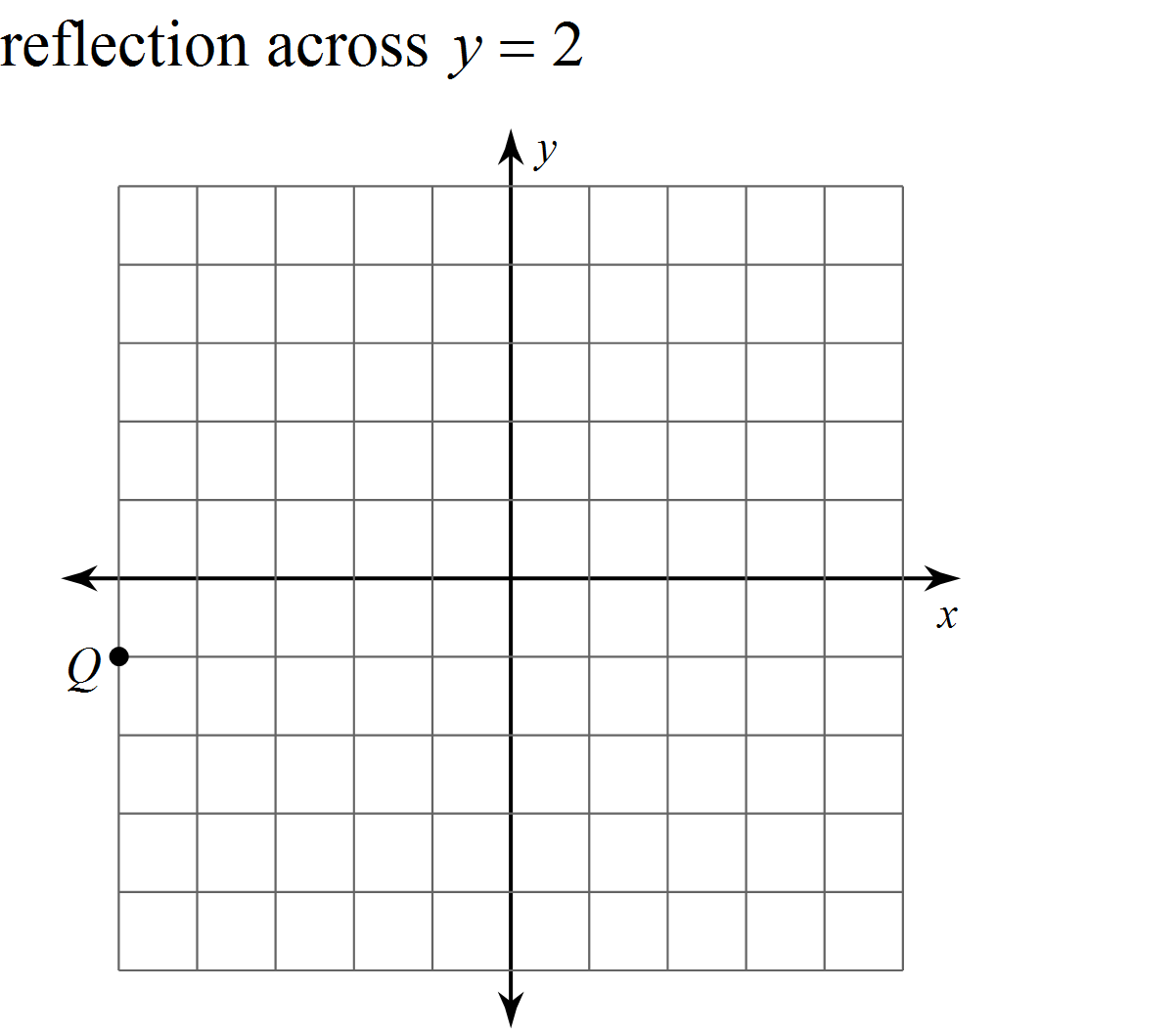
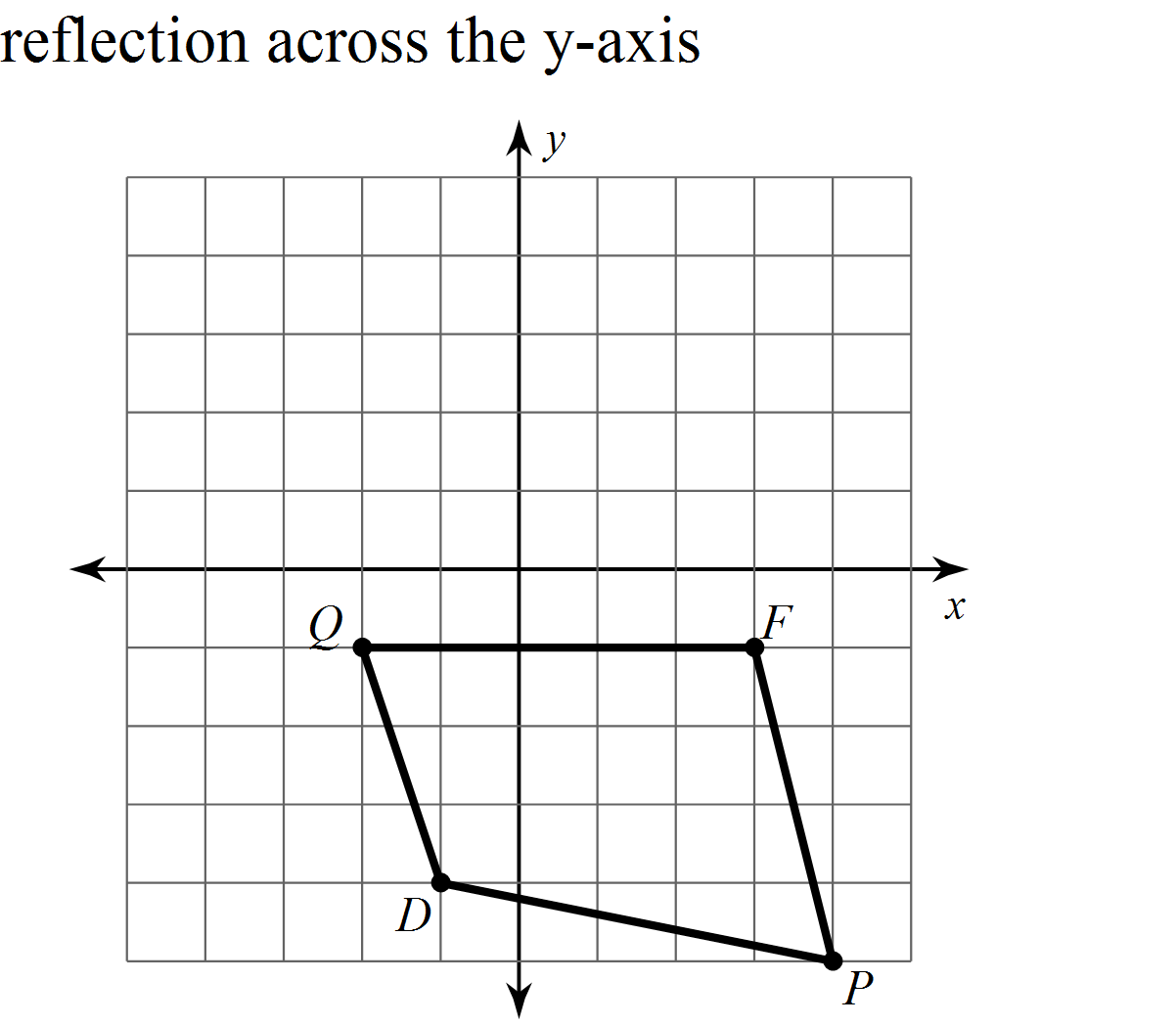
Then you reflect the figure across the x-axis. You complete

the design by reflecting the original figure and its image

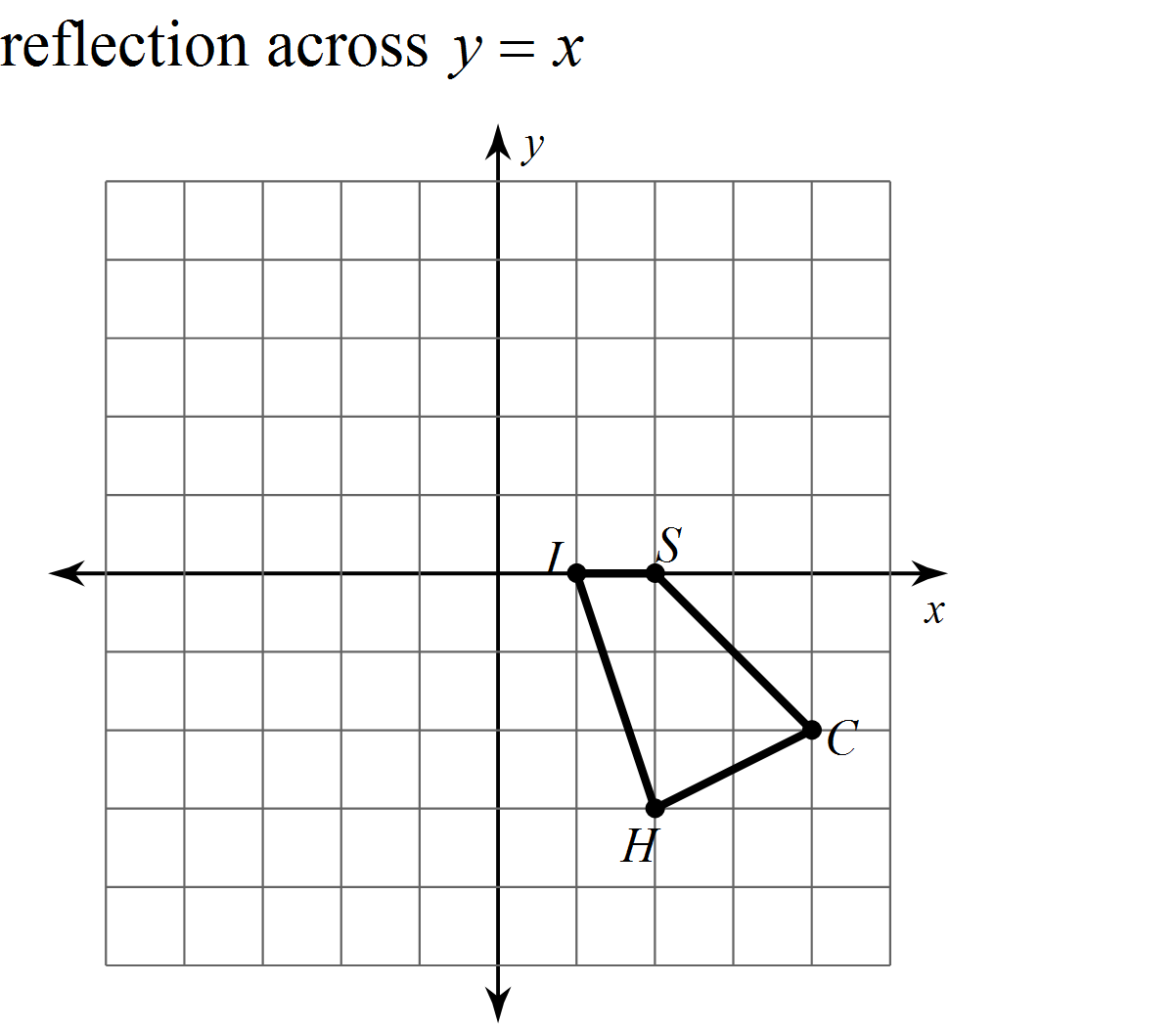
across the y-axis. Draw the completed design.

***Transform the pre-image below. Draw the resulting image.***

8. 9.

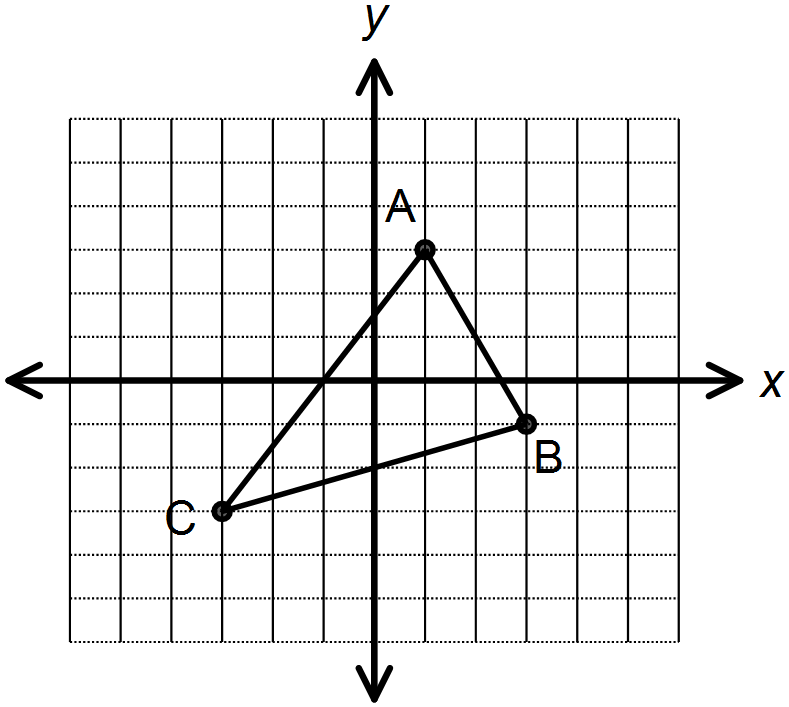
10. 11.

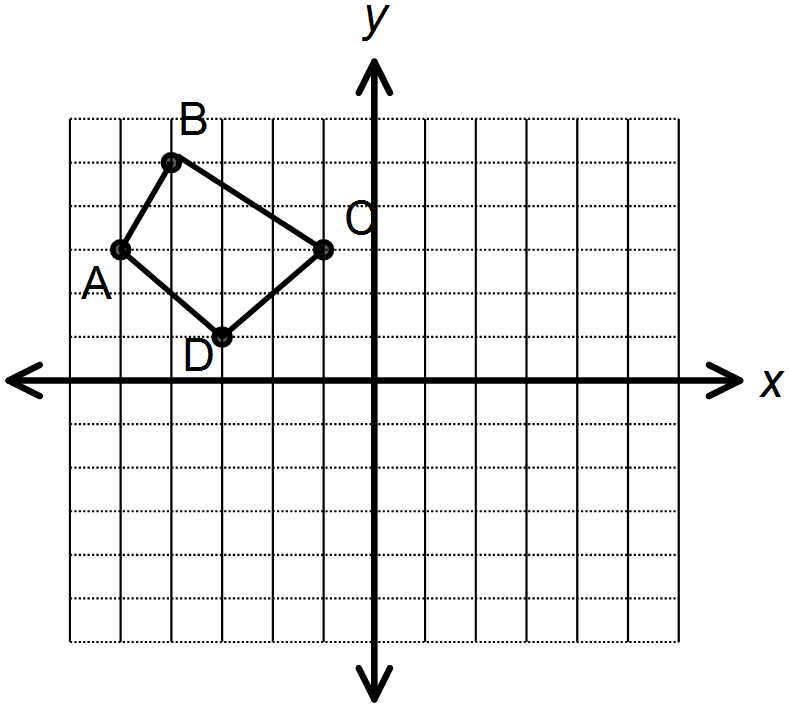
 

Translate & reflect across

Reflect over the & then translate &

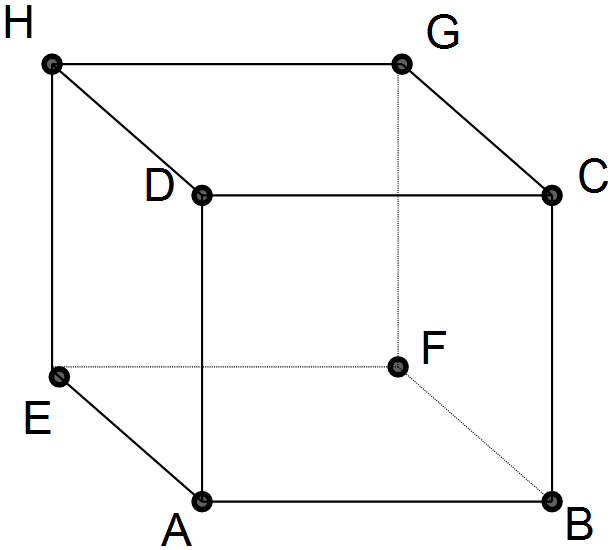
12. 13.





***REVIEW***

***#14-16: Use the diagram at the right.***



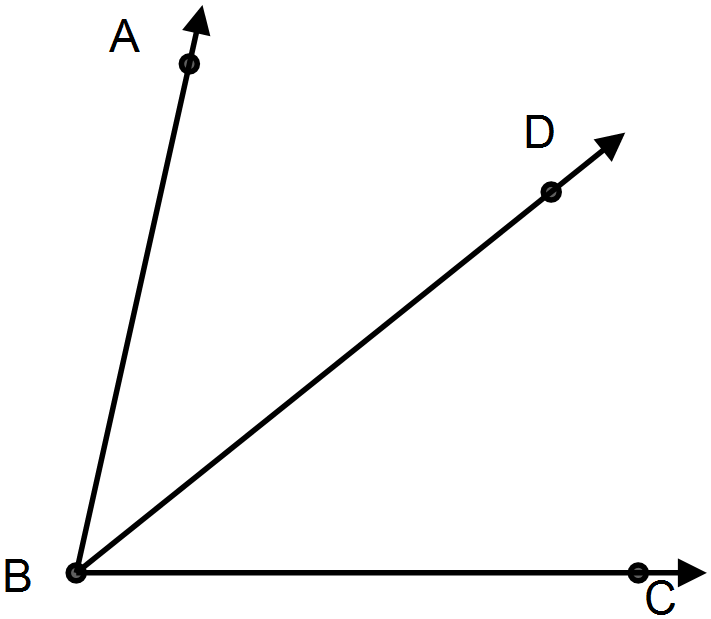
14. Name the intersection of planes

15. Will planes ever intersect?

16. Name two planes that will intersect at .

***#17-18: Use the angle at the right.* bisects .**

17. If



Find the measure of .

18. If

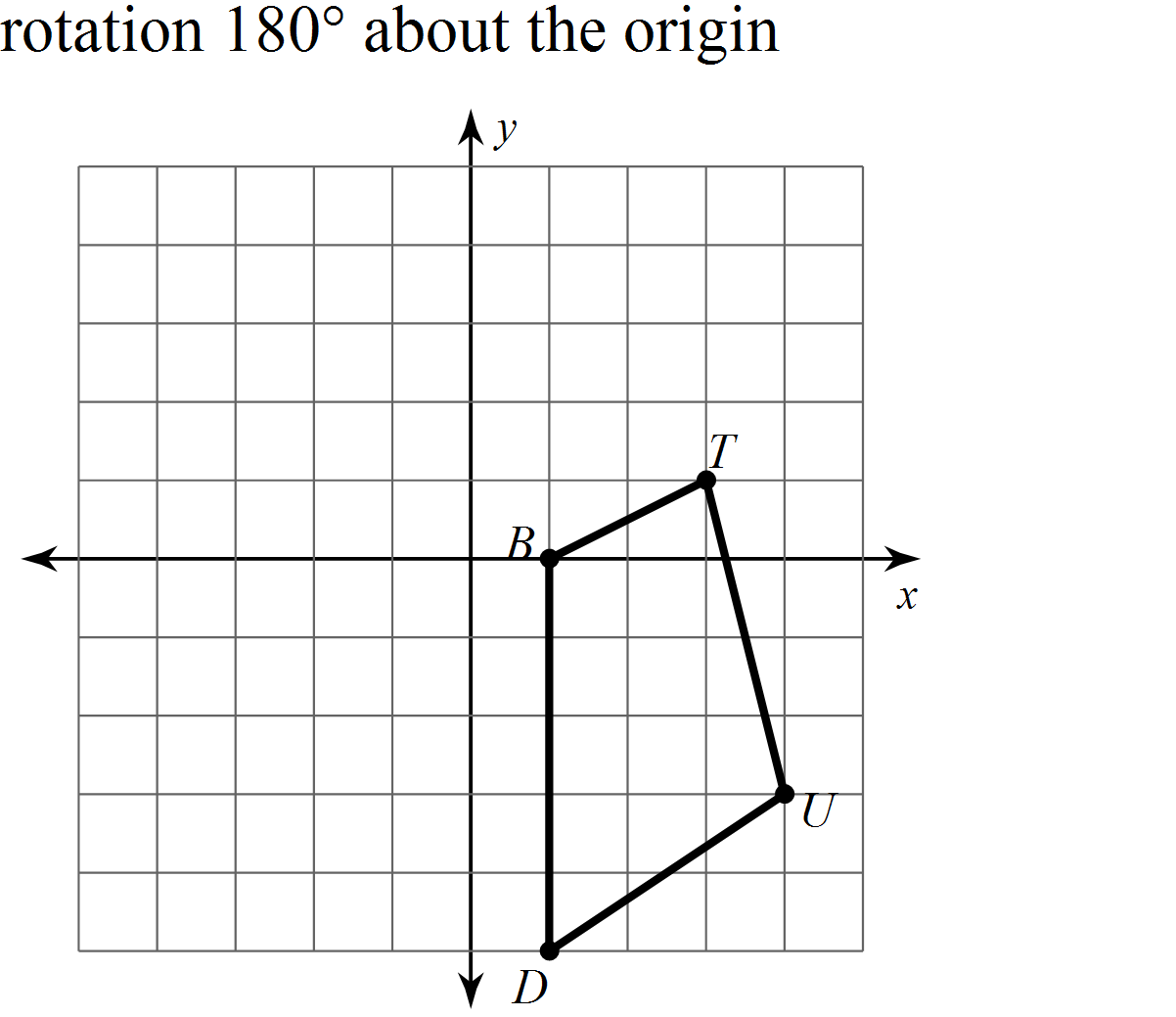
Find the measure of .

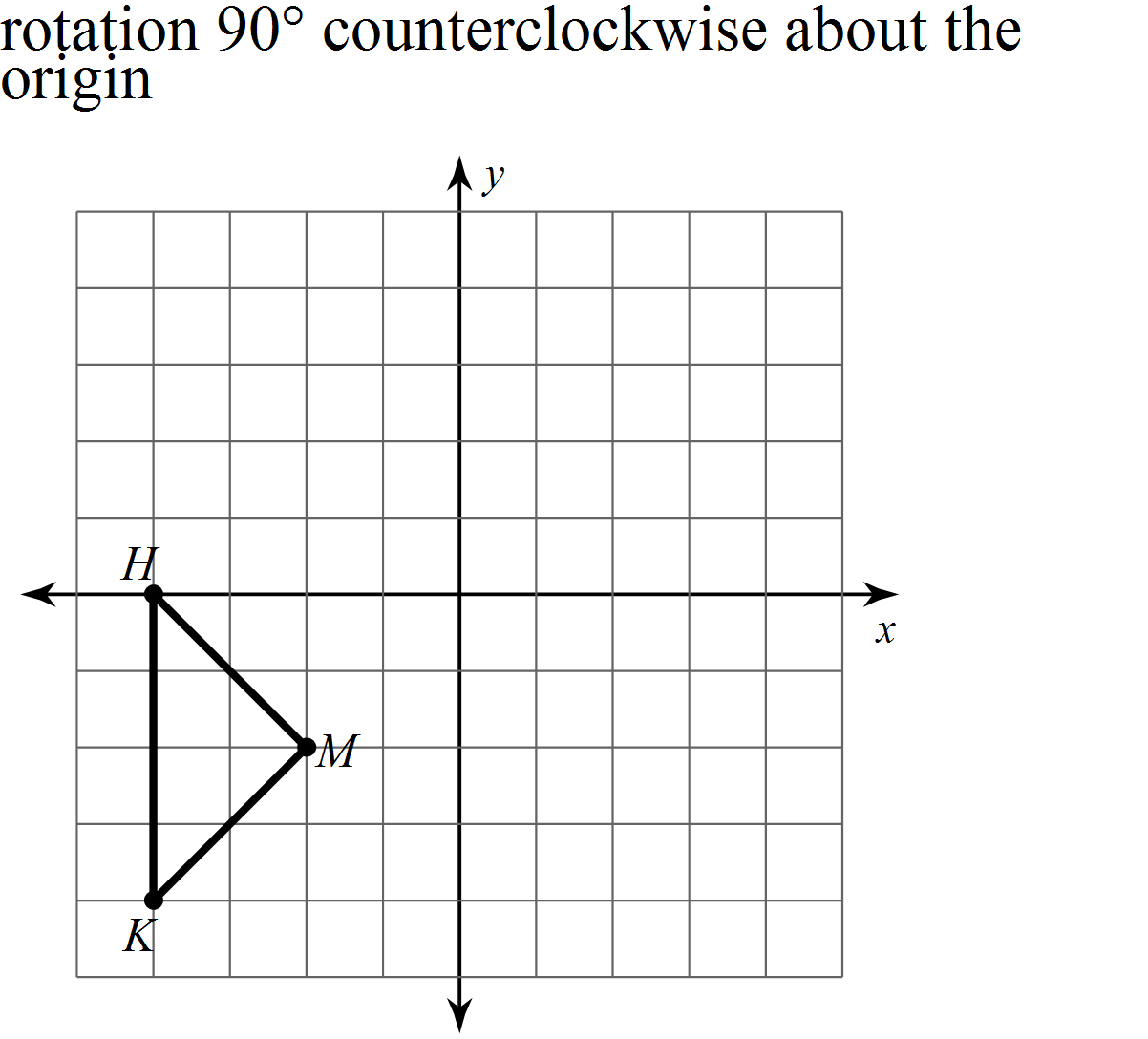
Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1.5 Homework**

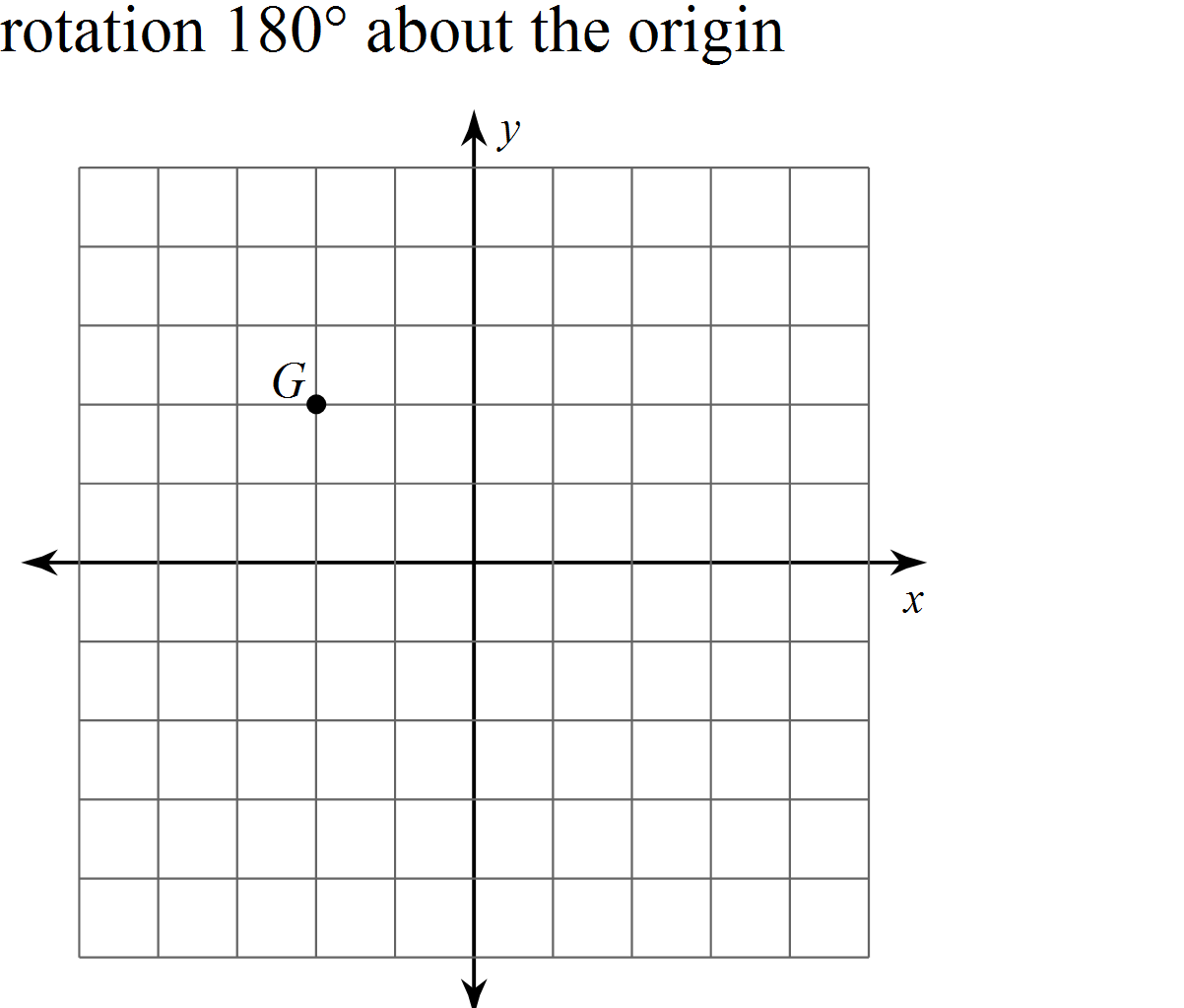
***#1-4: Draw the given rotation for each figure.***

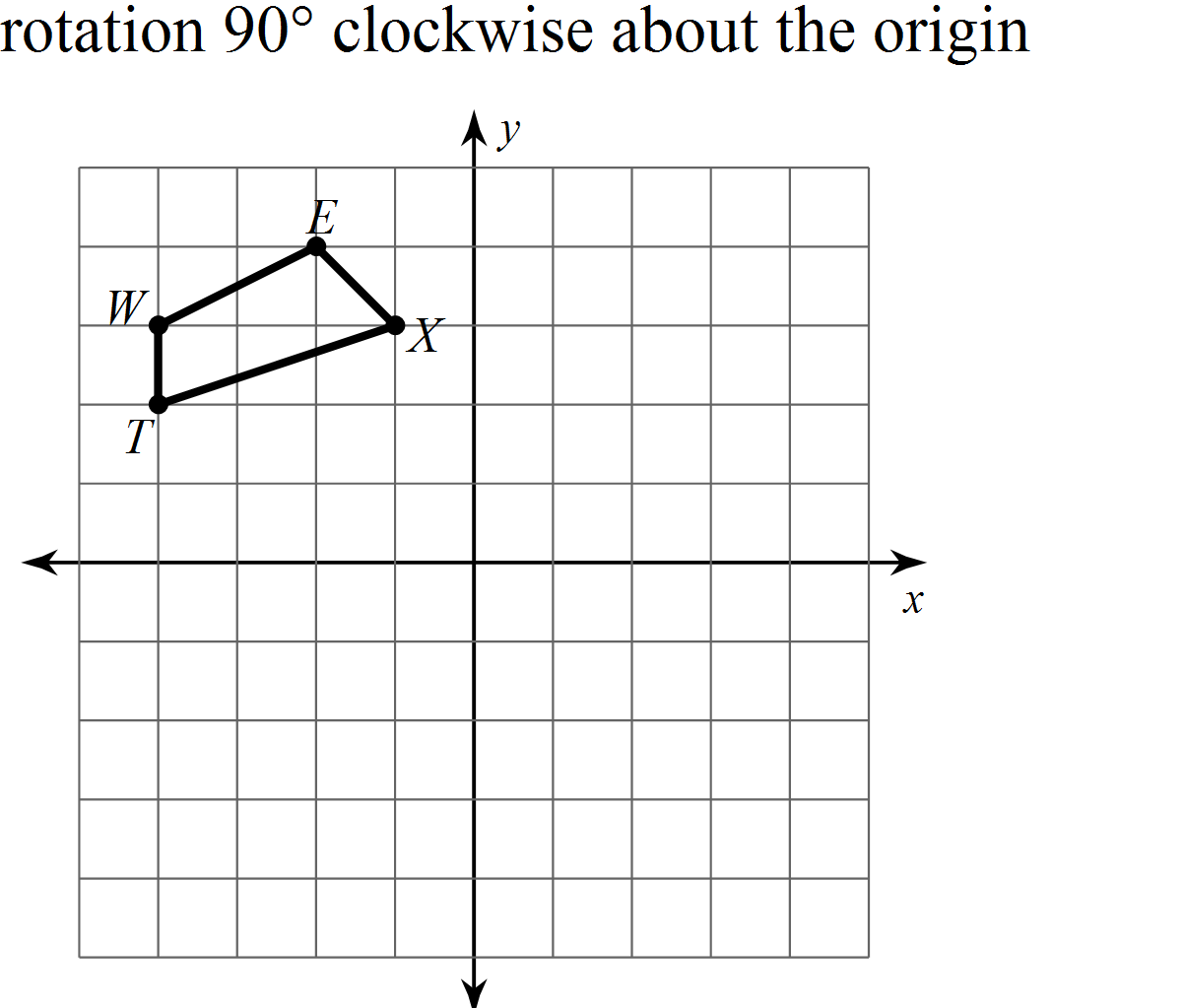
1. 2.





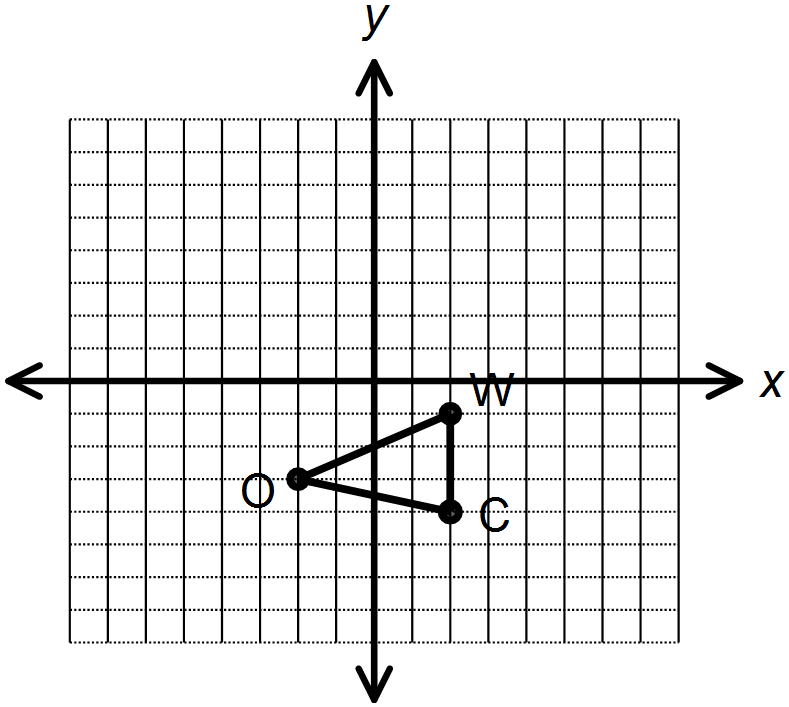
3. 4.





5. What are the coordinates for the image of after a

rotation 90° counterclockwise about the origin and a



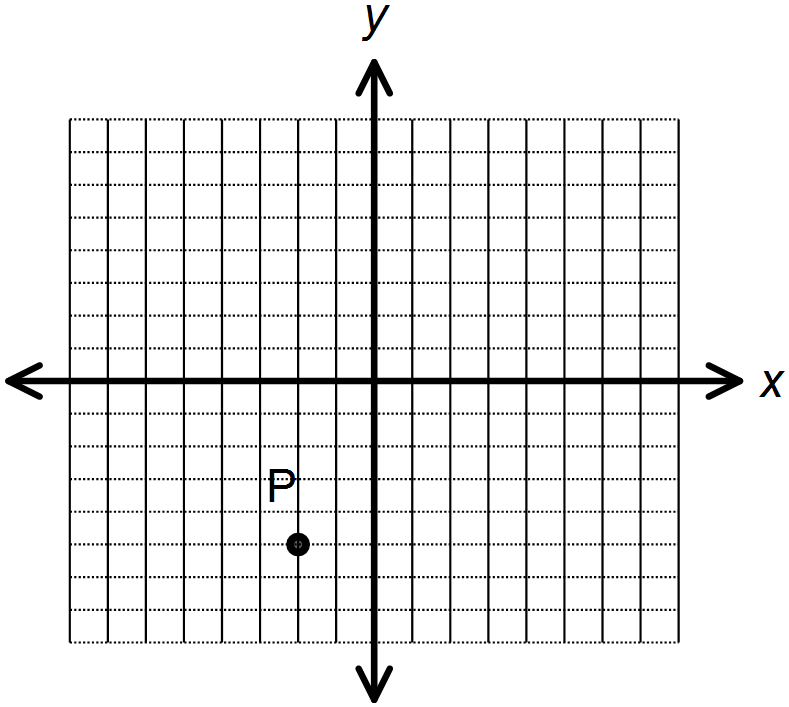
translation of ?

= \_\_\_\_\_\_\_\_\_\_

= \_\_\_\_\_\_\_\_\_\_

= \_\_\_\_\_\_\_\_\_\_

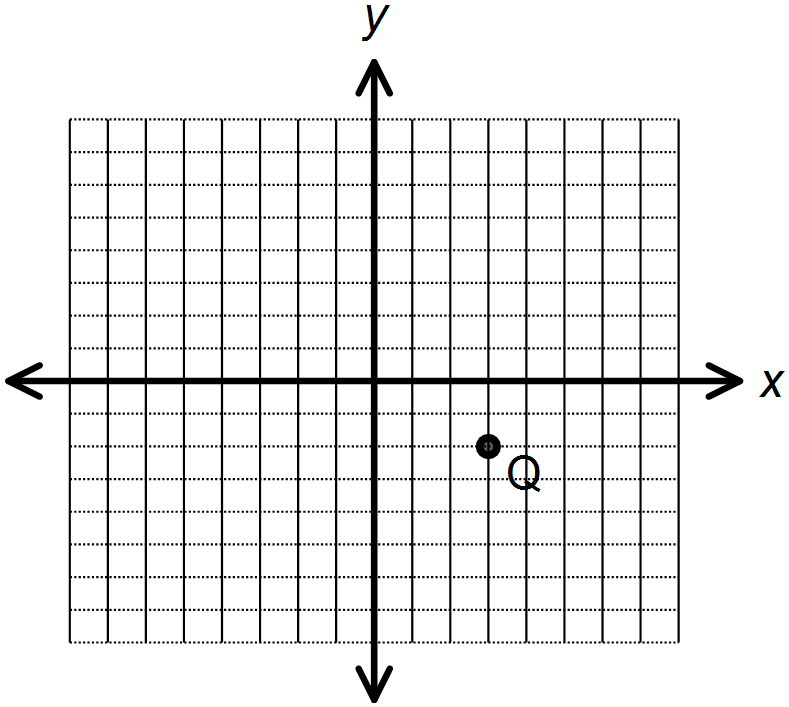
6. The point is rotated 90° clockwise about



the origin, and then the image is reflected across the

line . What are the coordinates of the final image P’?

= \_\_\_\_\_\_\_\_\_\_\_\_\_



7. The point is translated by ,

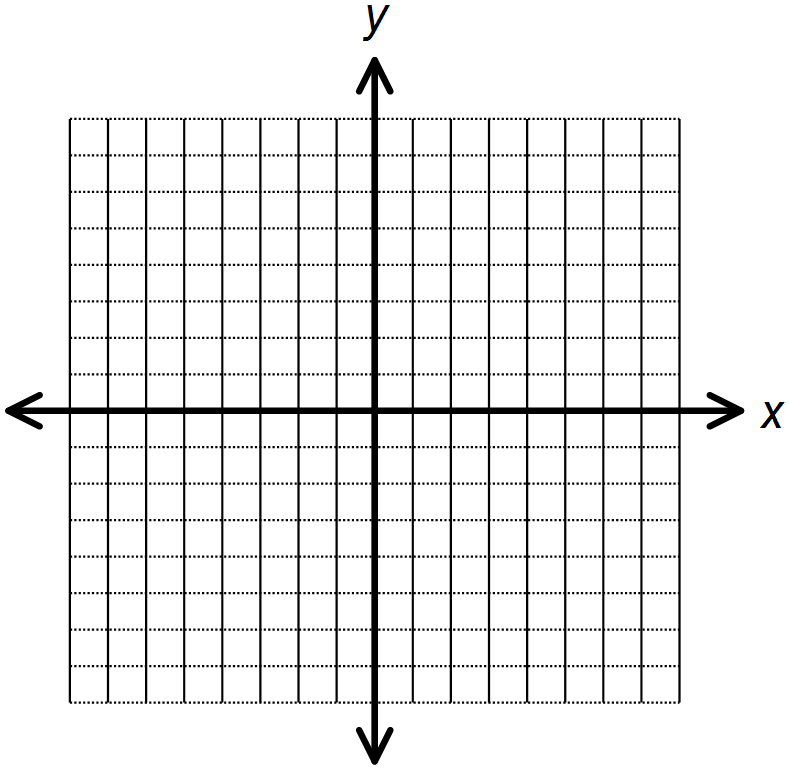
rotated ° counterclockwise, and finally reflected across

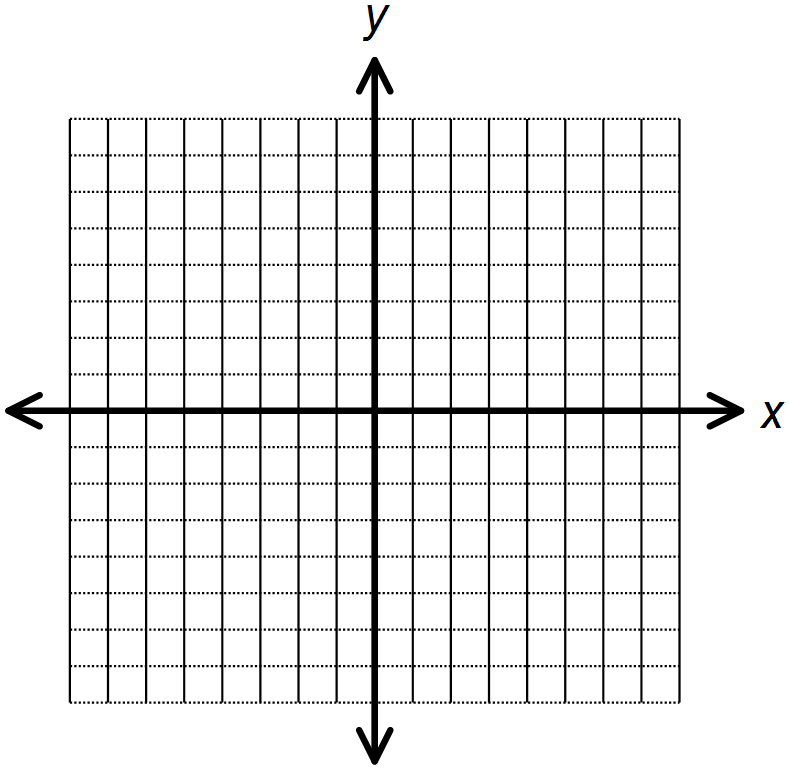
the . What are the coordinates of the final image Q’?

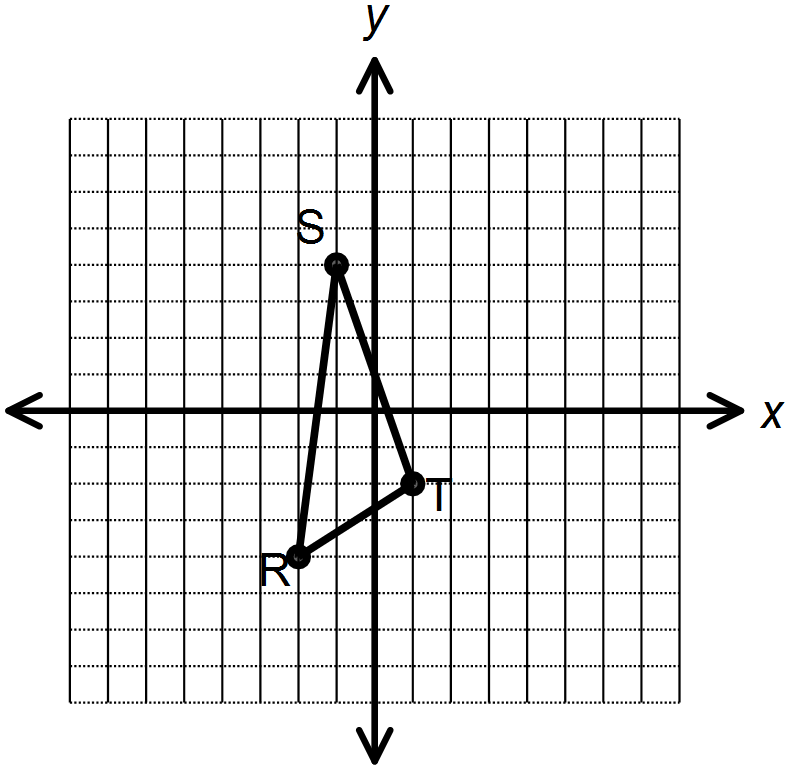
= \_\_\_\_\_\_\_\_\_\_\_\_\_

***Follow the directions below to transform the figures. Draw the images on the graphs.***

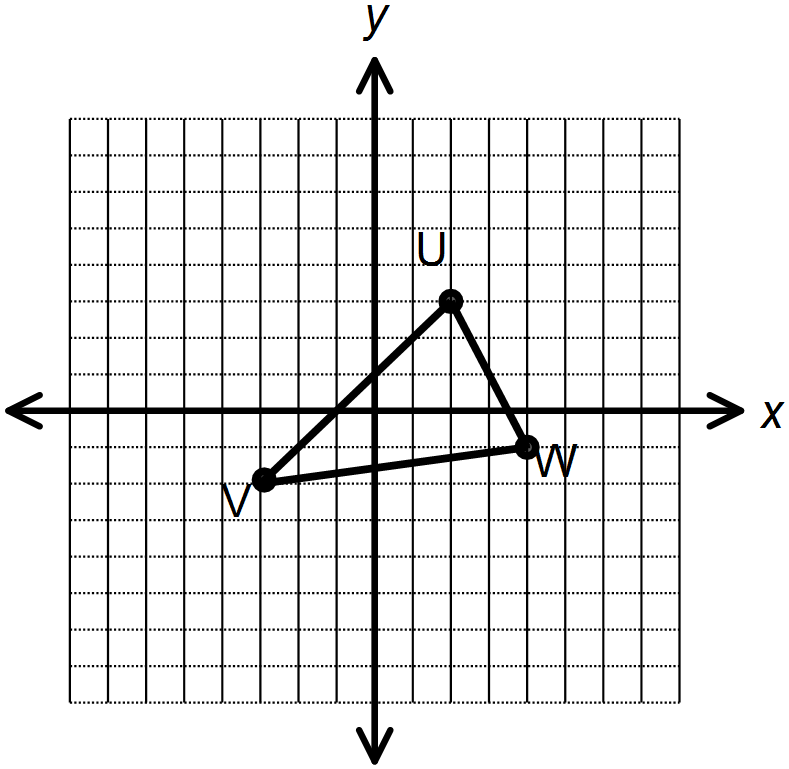
8. Rotate° clockwise, translate , and reflect across the.

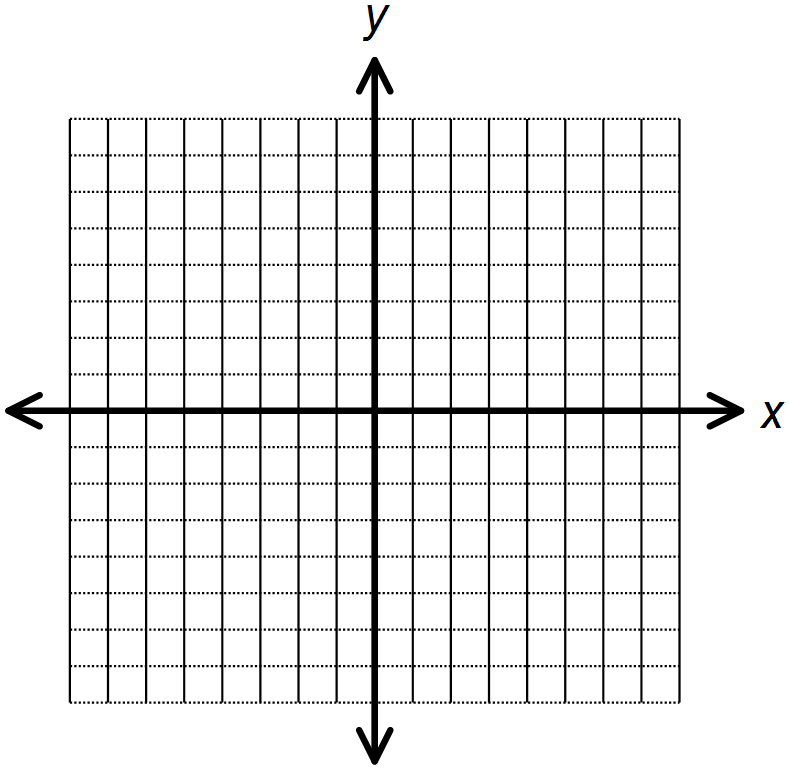


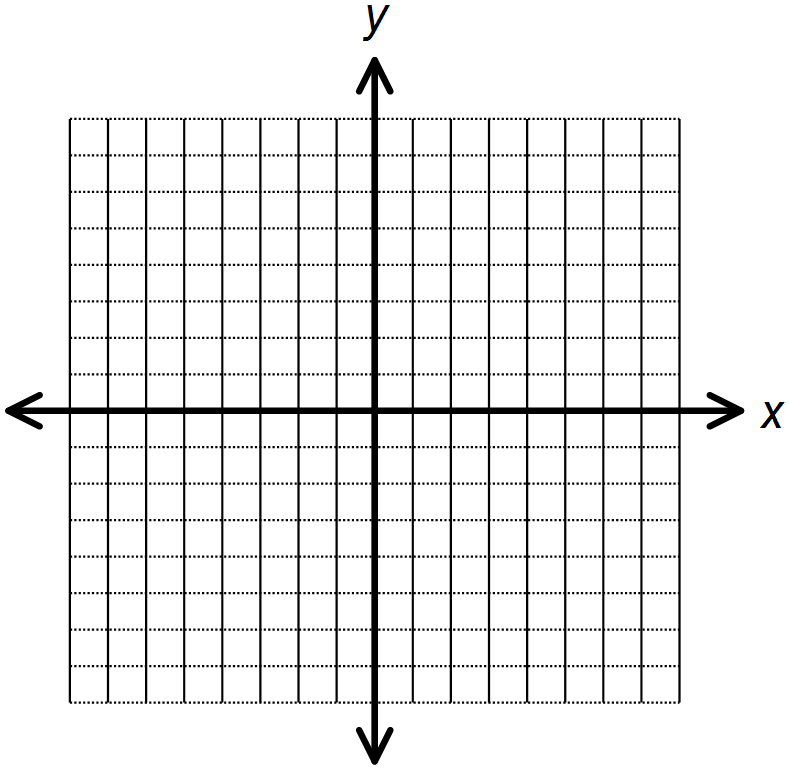




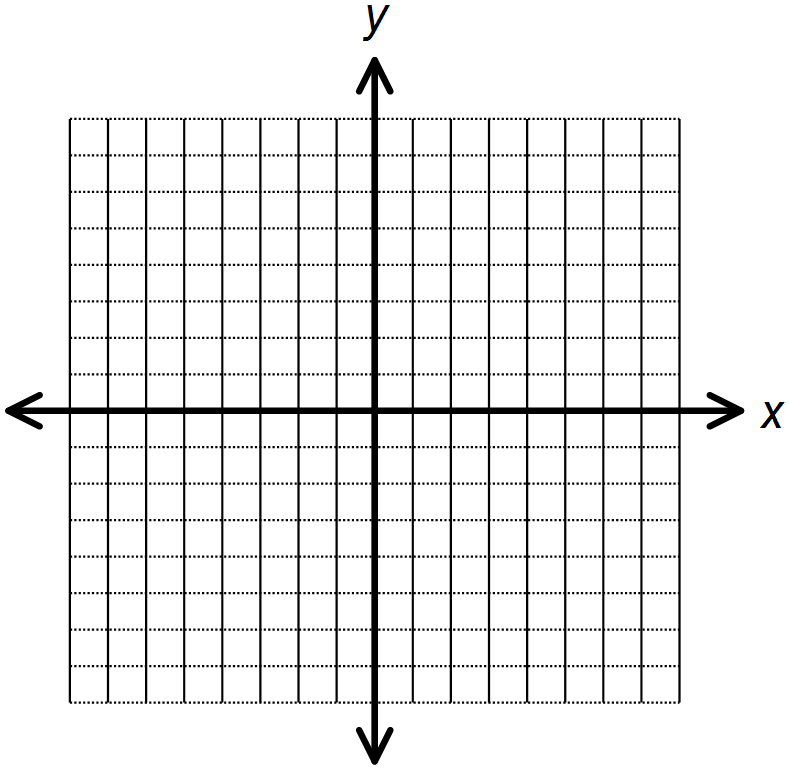
9. Rotate°, reflect across the line , and rotate again 90° counter-clockwise.

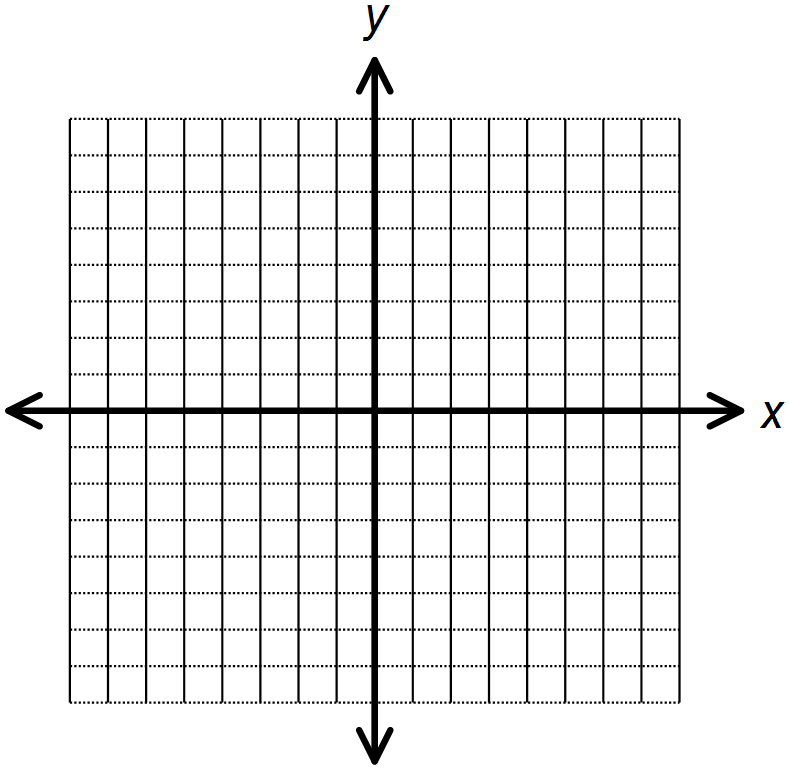


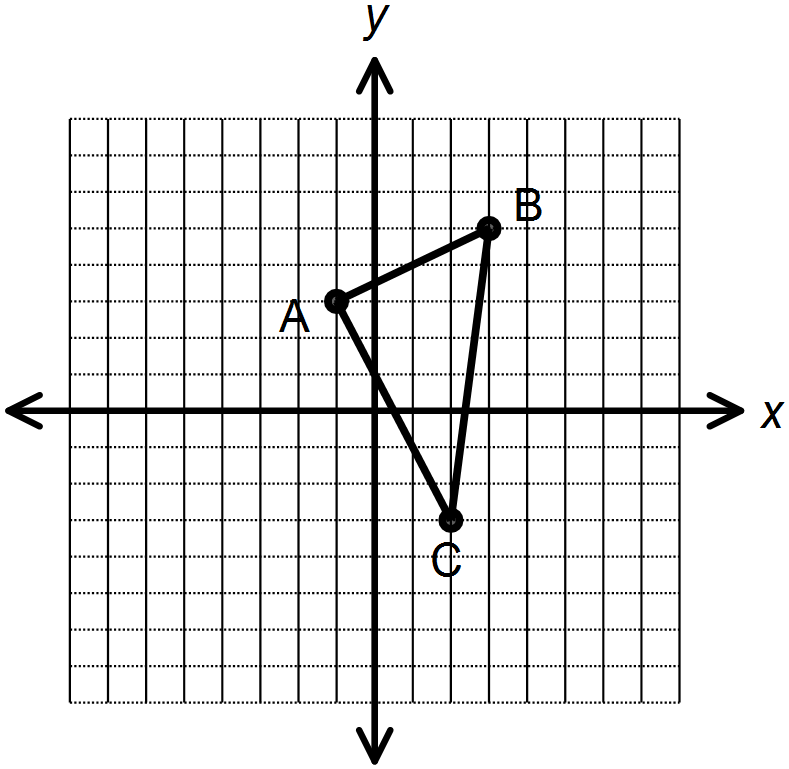


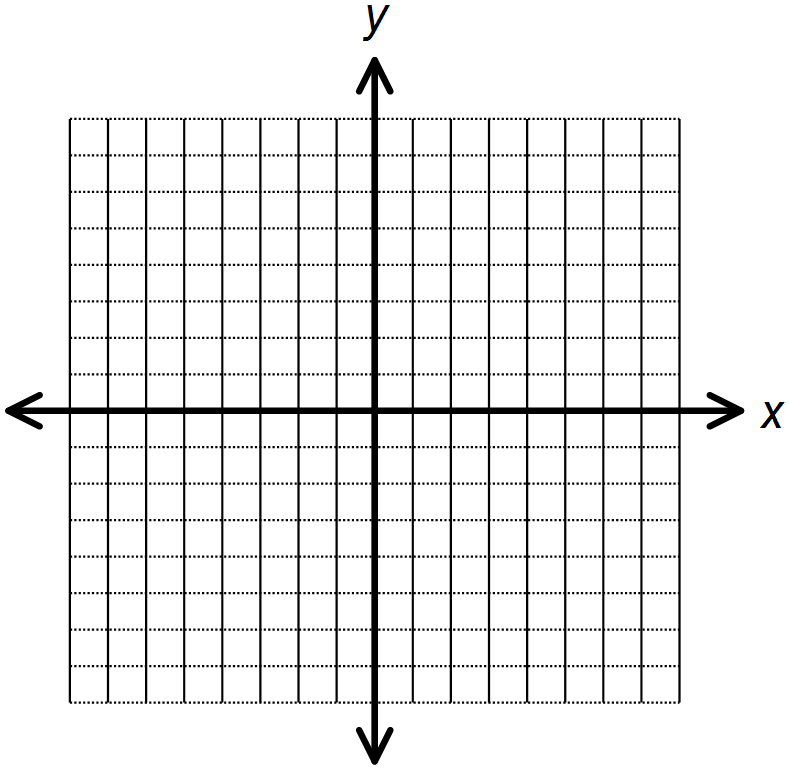


10. Translate , reflect across the y-axis, and translate









11. Reflect across the line , rotate 270° clockwise, and translate

