Name: _____ **Class:** _____ **Date:** _____ **ID: A**

PAP Geometry - HW 1.4 - Translating and Constructing Angles and Angle Bisectors

Vocabulary
Define each term in your own words.

1. angle

2. angle bisector

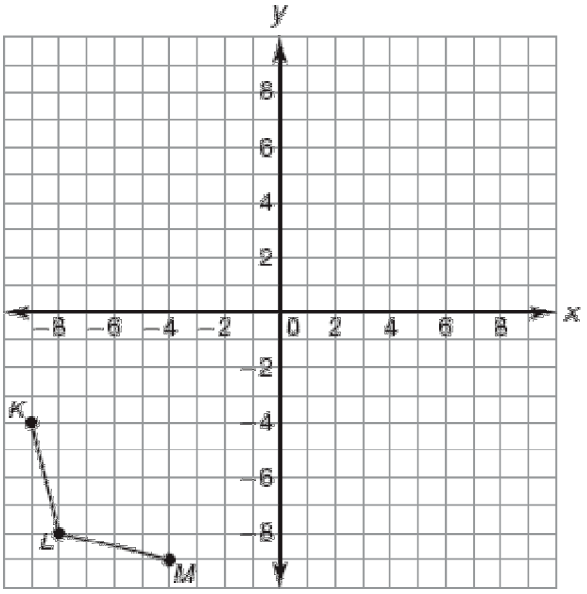
Describe how to perform each construction in your own words.

3. copying or duplicating an angle

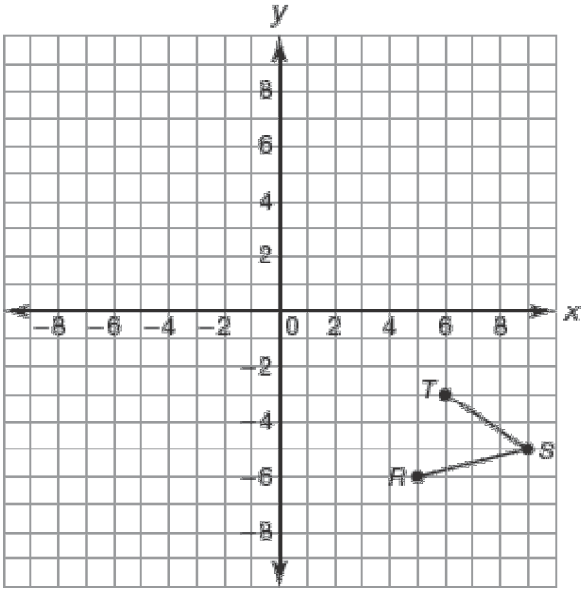
4. bisecting an angle

Translate each given angle on the coordinate plane as described.

5. Translate $\angle KLM$ 13 units up.

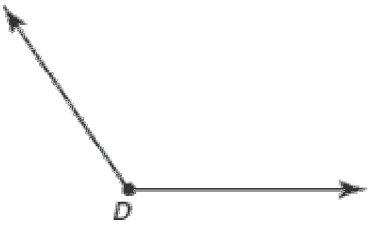


6. Translate $\angle RST$ 15 units to the left and 9 units up.

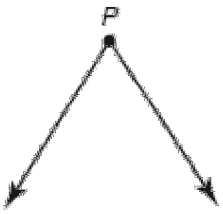


Construct each angle as described.

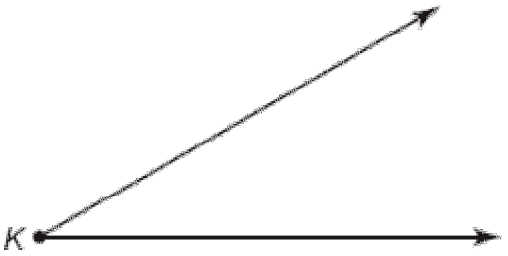
7. Copy $\angle D$.



8. Copy $\angle P$.

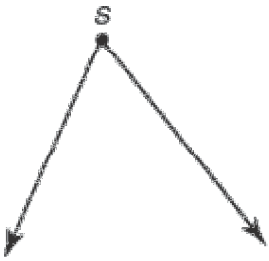


9. Construct an angle that is twice the measure of $\angle K$.

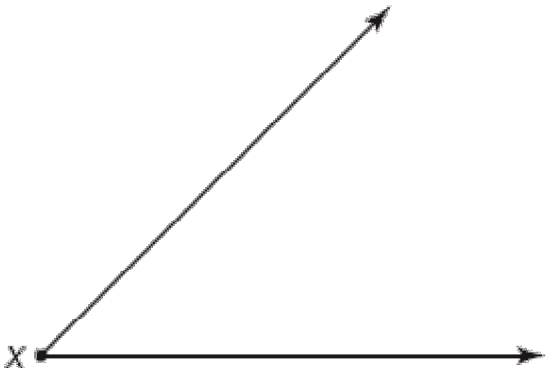


Construct the angle bisector of the given angle.

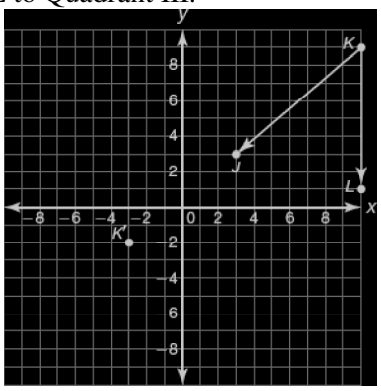
10.



11. Construct an angle that is one-fourth the measure of $\angle X$.



12. Point K in $\angle JKL$ has been translated to Quadrant III to create image K'. Describe and perform the translation(s) needed to translate $\angle JKL$ to Quadrant III.

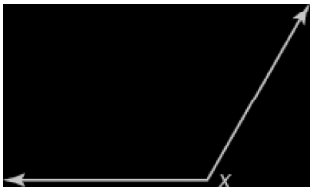


a. Describe how you can translate the angle to Quadrant III.

b. Determine what the coordinates will be for points J', K', and L' before translating the angle. Explain how you determined your answers.

c. Verify your answers to part (b) by translating $\angle JKL$ to Quadrant III.

13. Analyze $\angle X$.



a. Explain how to construct an angle that is one-fourth the measure of $\angle X$ using only your compass and straightedge.

b. Construct an angle that is one-fourth the measure of $\angle X$. Label the angle as $\angle WXY$.