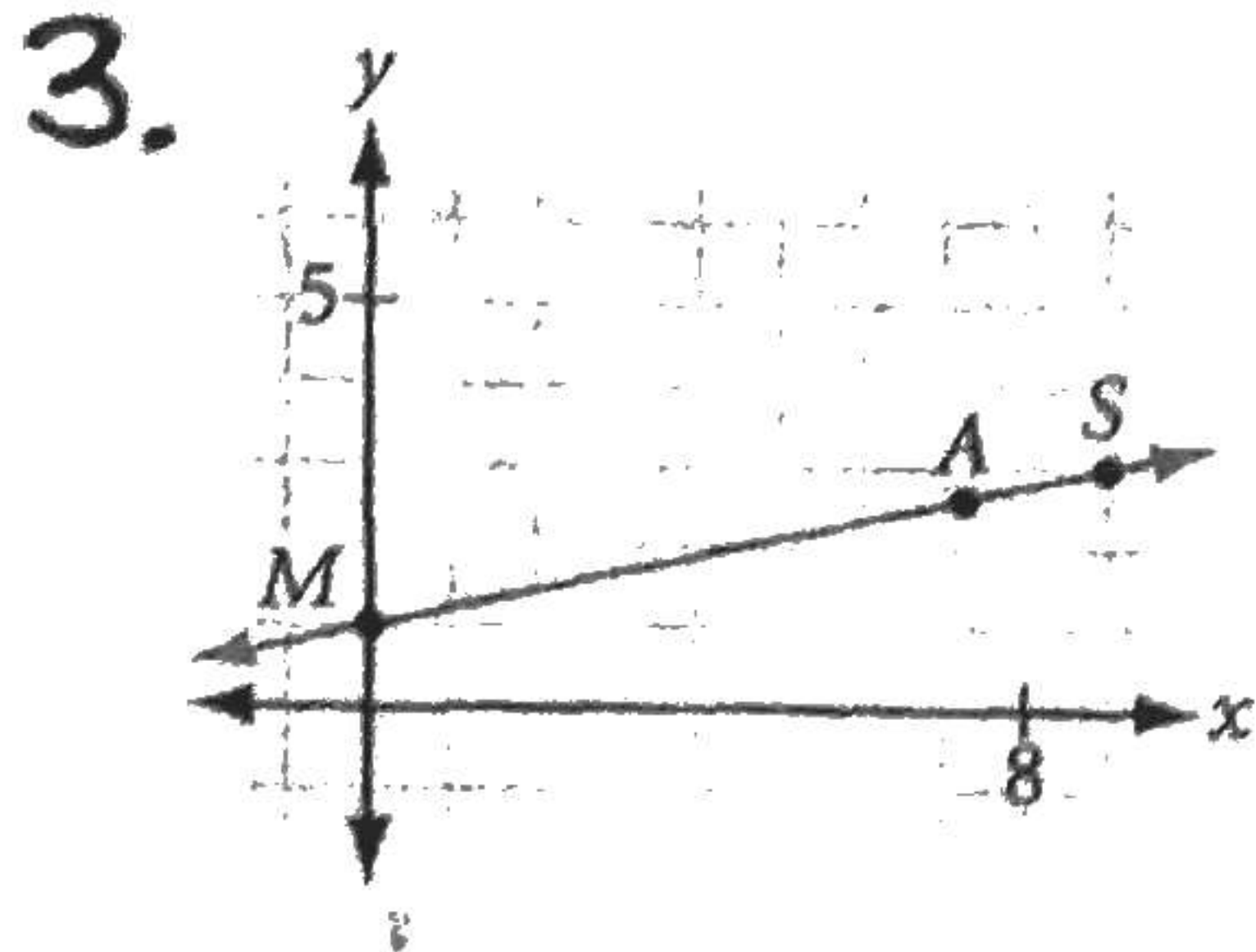
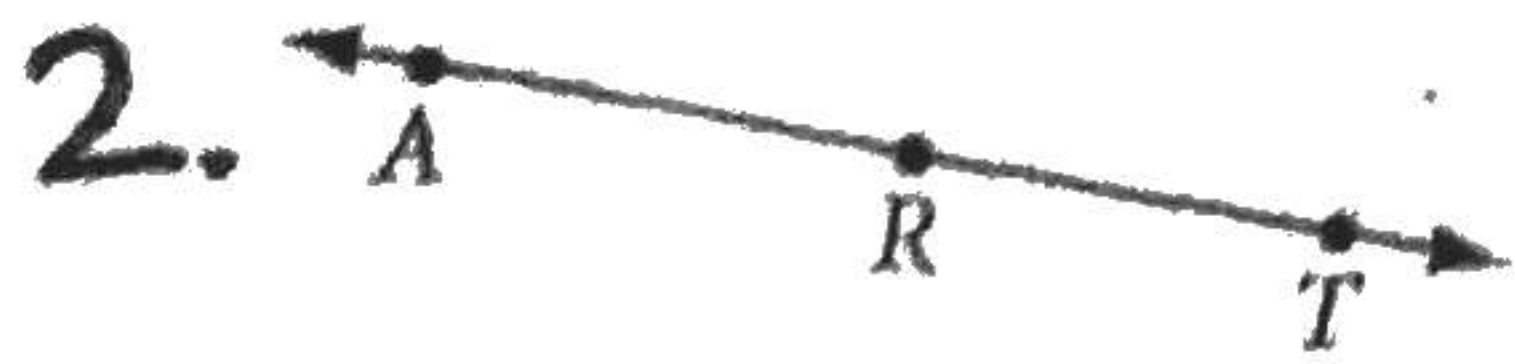


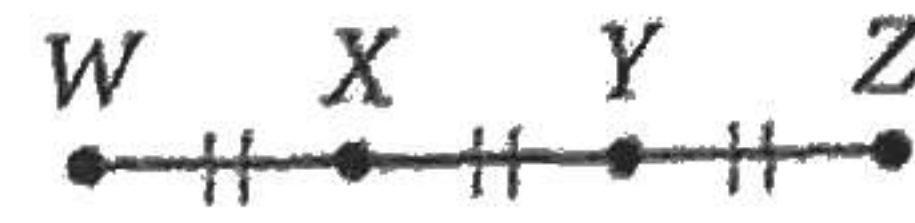
Basics of Geometry

Name: _____

For Exercises 1-3, name each line in two different ways.



4. Name each midpoint and the segment it bisects.



For Exercises 5 and 6, draw and label each line segment.

5. \overline{AB}

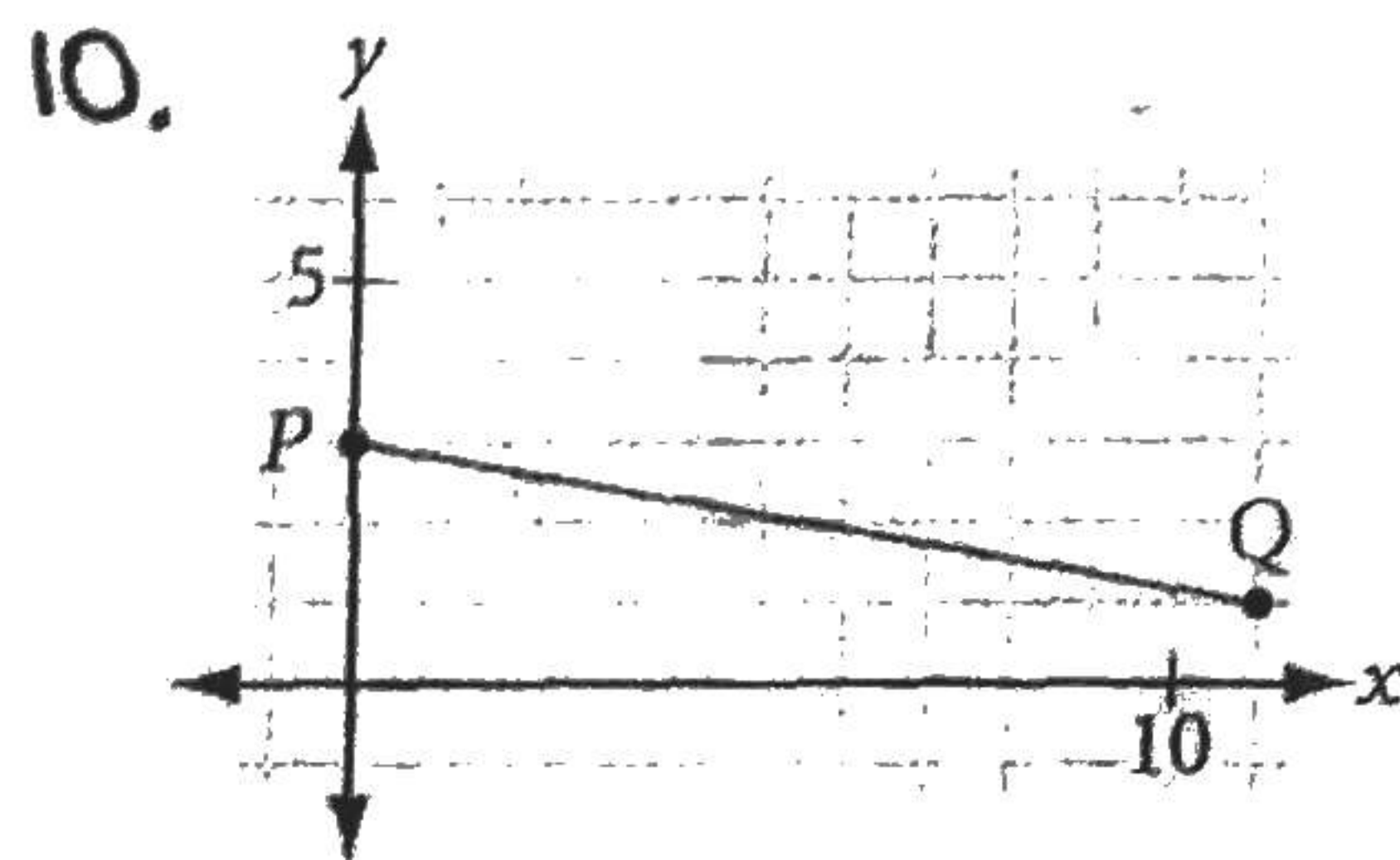
6. \overline{PQ}

For Exercises 7-8, draw two points and label them. Then use a ruler to draw each line. Don't forget to use arrowheads to show that the line extends indefinitely.

7. \overleftrightarrow{AB}

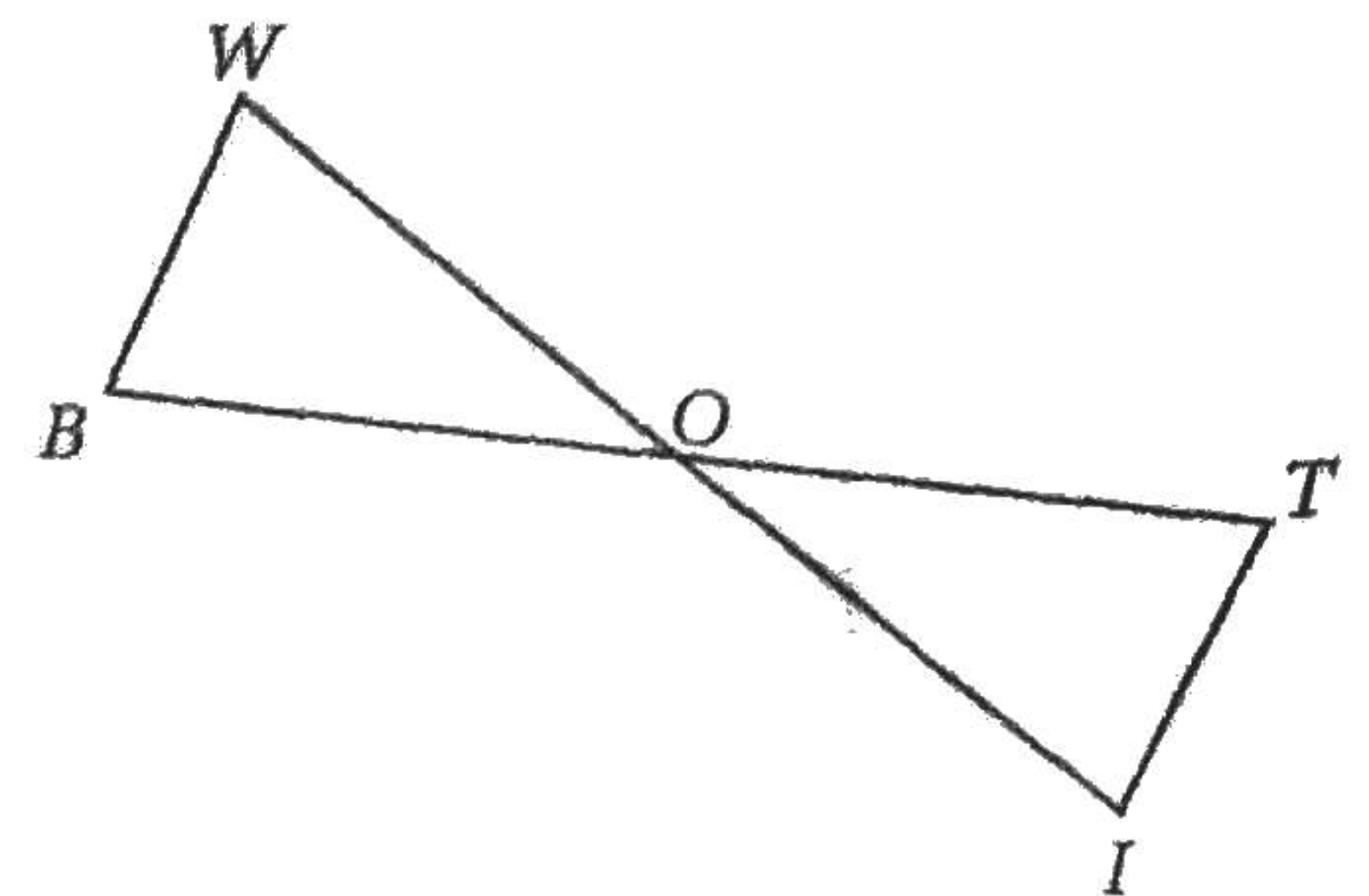
8. \overleftrightarrow{KL}

For Exercises 9-10, name each line segment.

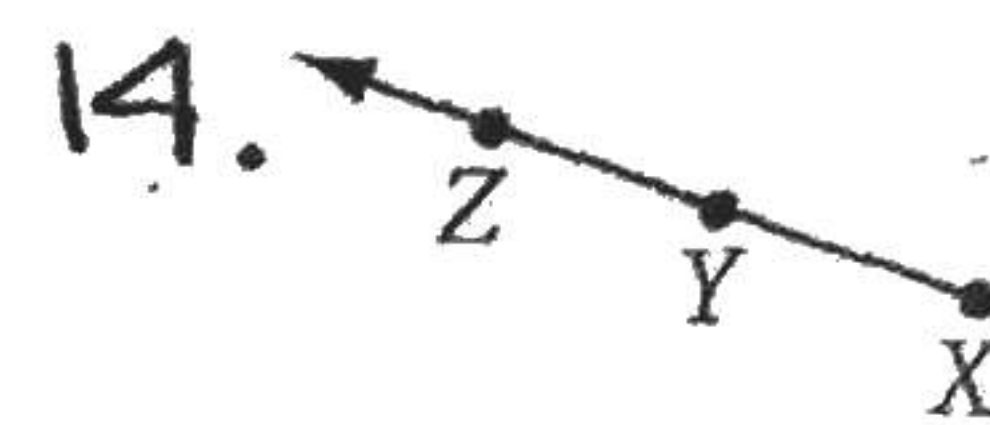
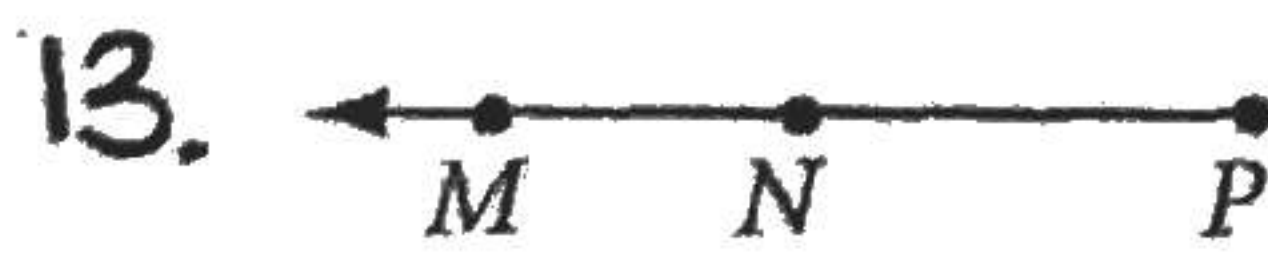


Mark the figure with the given information.

11. $\overline{BW} \cong \overline{TI}$ $\angle WBT \cong \angle ITB$
 $\overline{WO} \cong \overline{IO}$ $\angle BWO \cong \angle TIO$



For Exercises 12-14, name the ray in two different ways.



For Exercises 15-17, draw and label each ray.

15. \overrightarrow{AB}

16. \overrightarrow{YX}

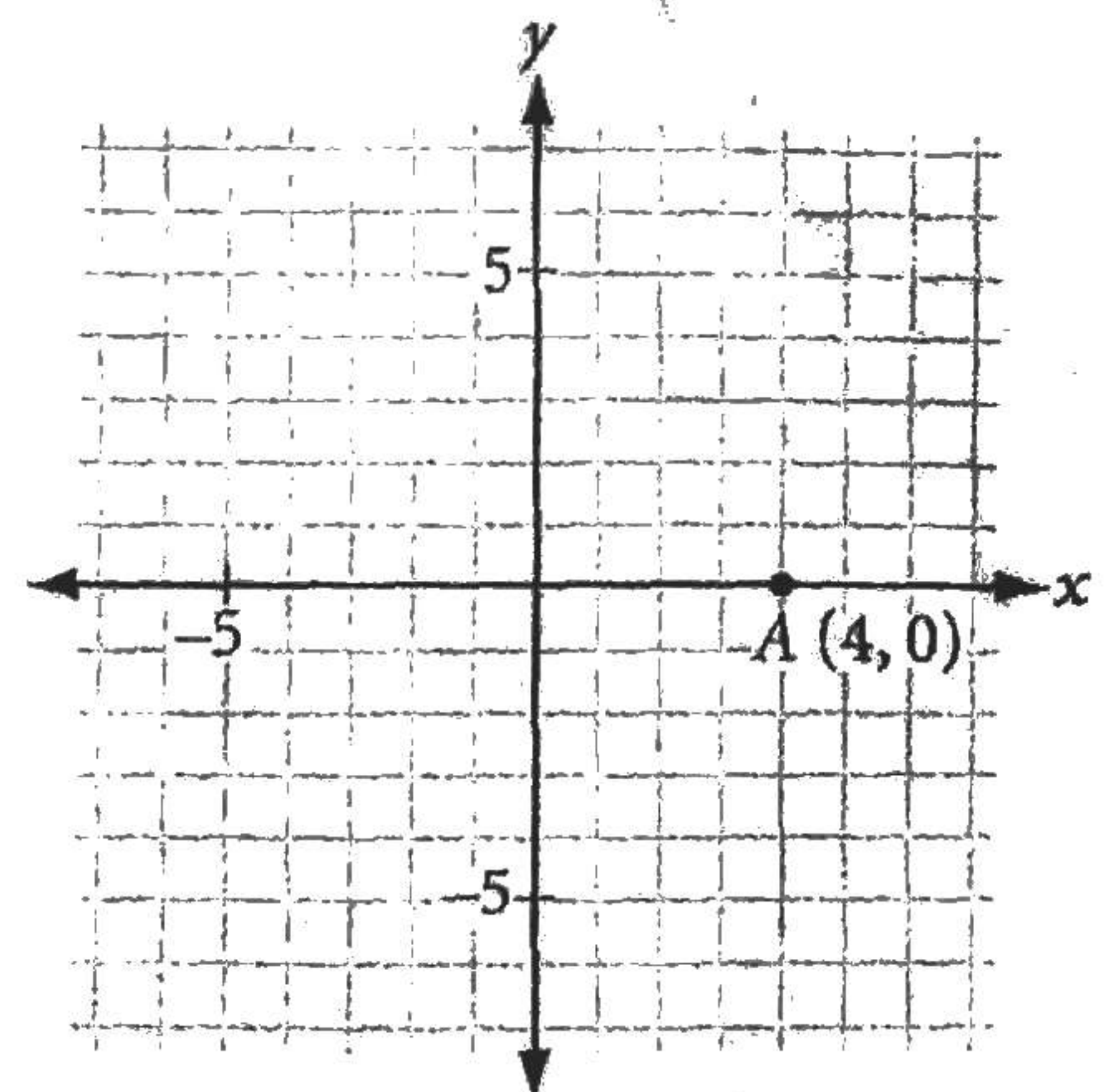
17. \overrightarrow{MN}

For Exercises 18-20, draw axes on graph paper and locate point A(4, 0) as shown.

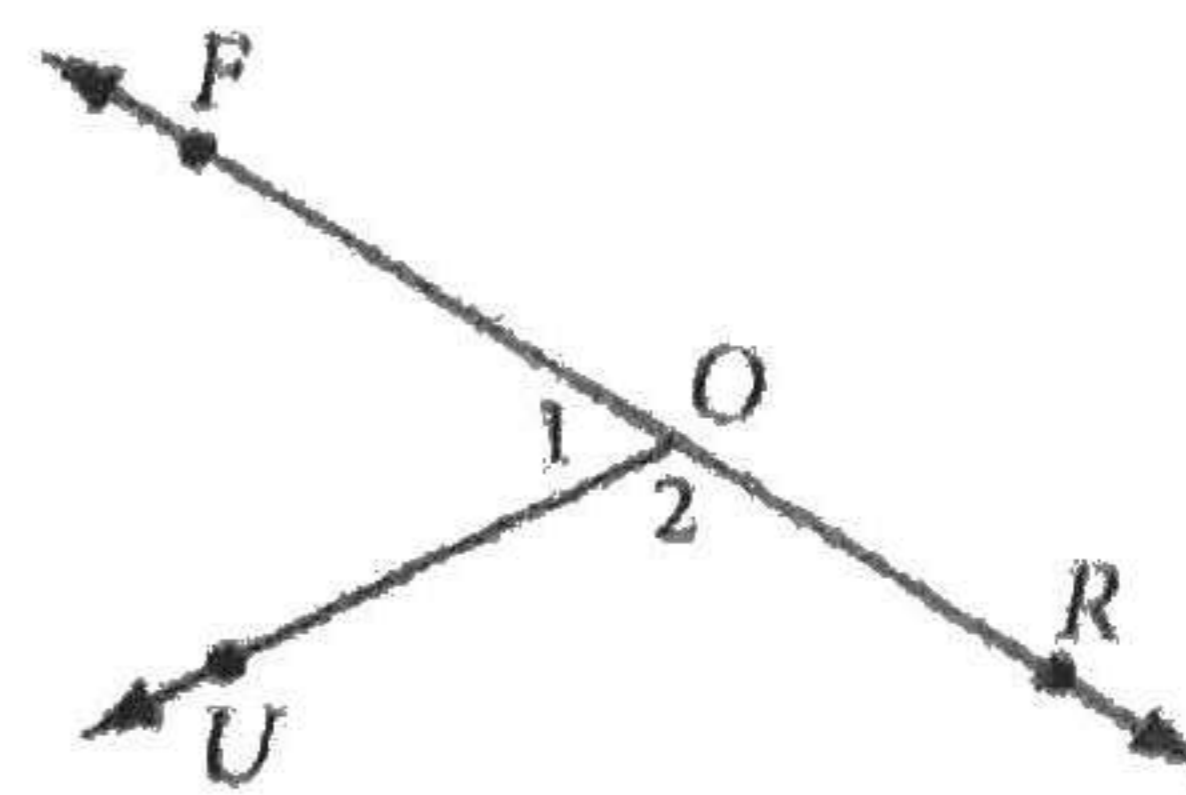
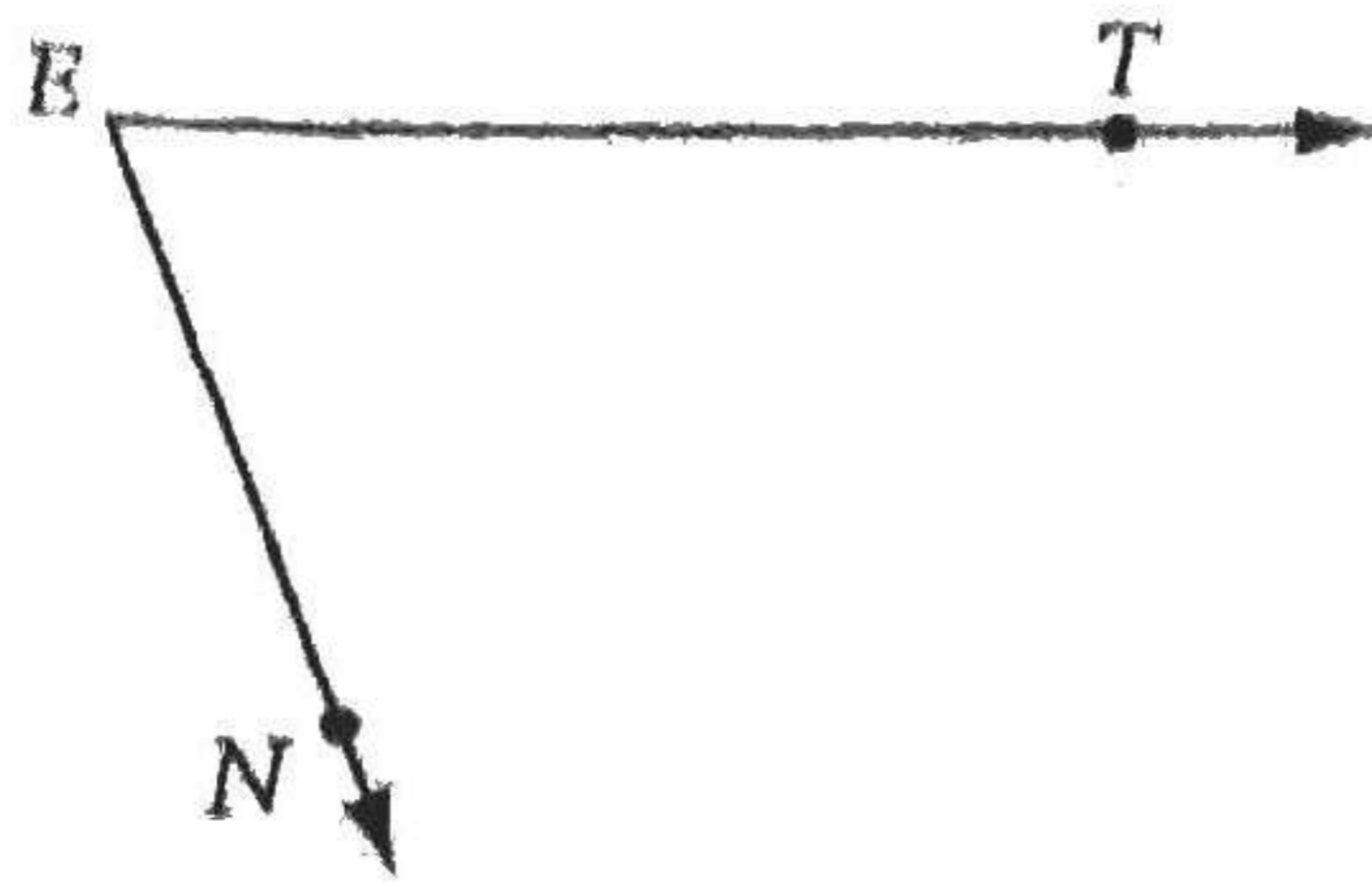
18. Draw \overline{AB} , where point B has coordinates (2, -6).

19. Draw \overline{OM} with endpoint (0, 0) that goes through point M(2, 2).

20. Draw \overline{CD} through points C(-2, 1) and D(-2, -3).



21. Name each angle in three different ways.



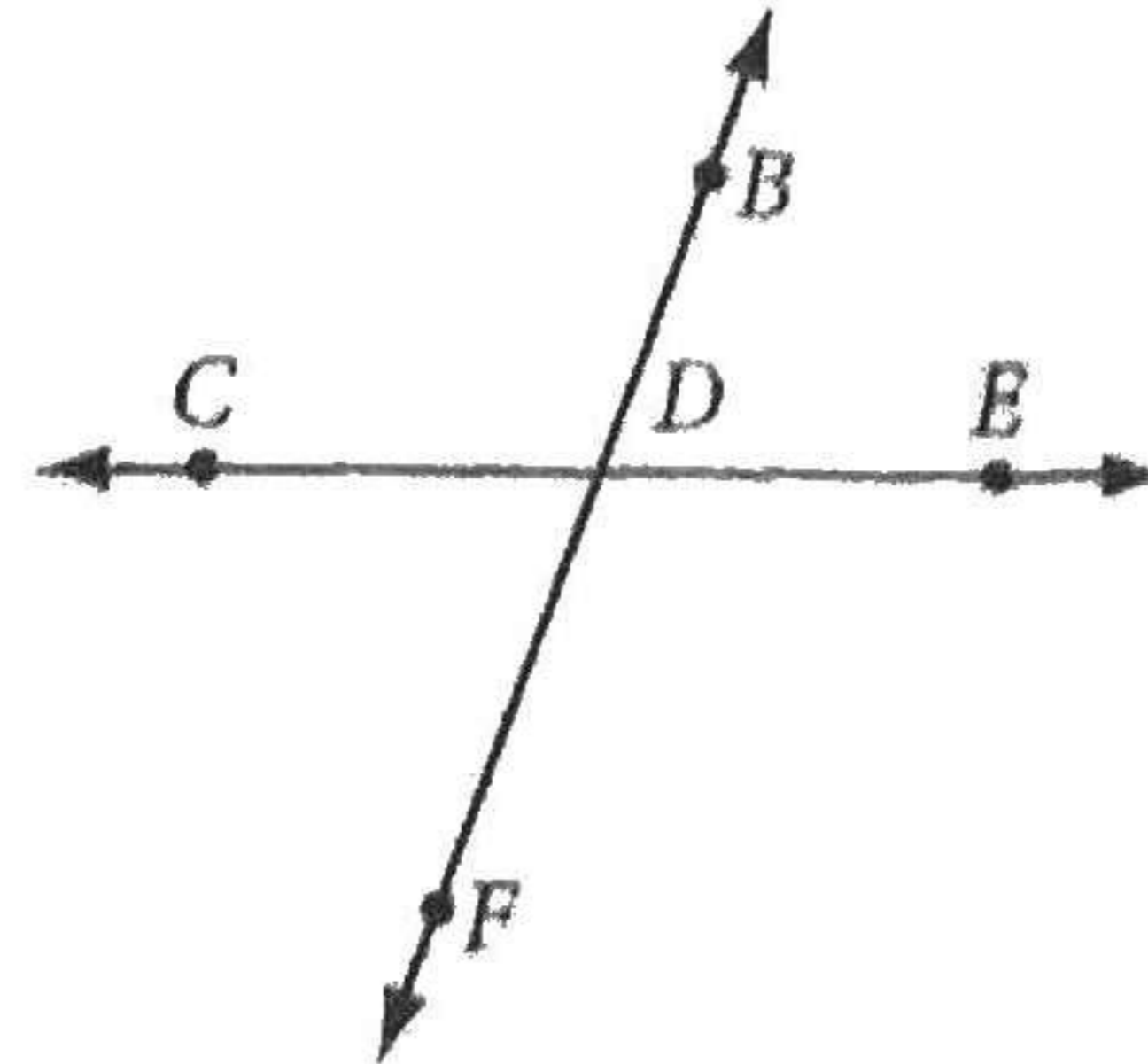
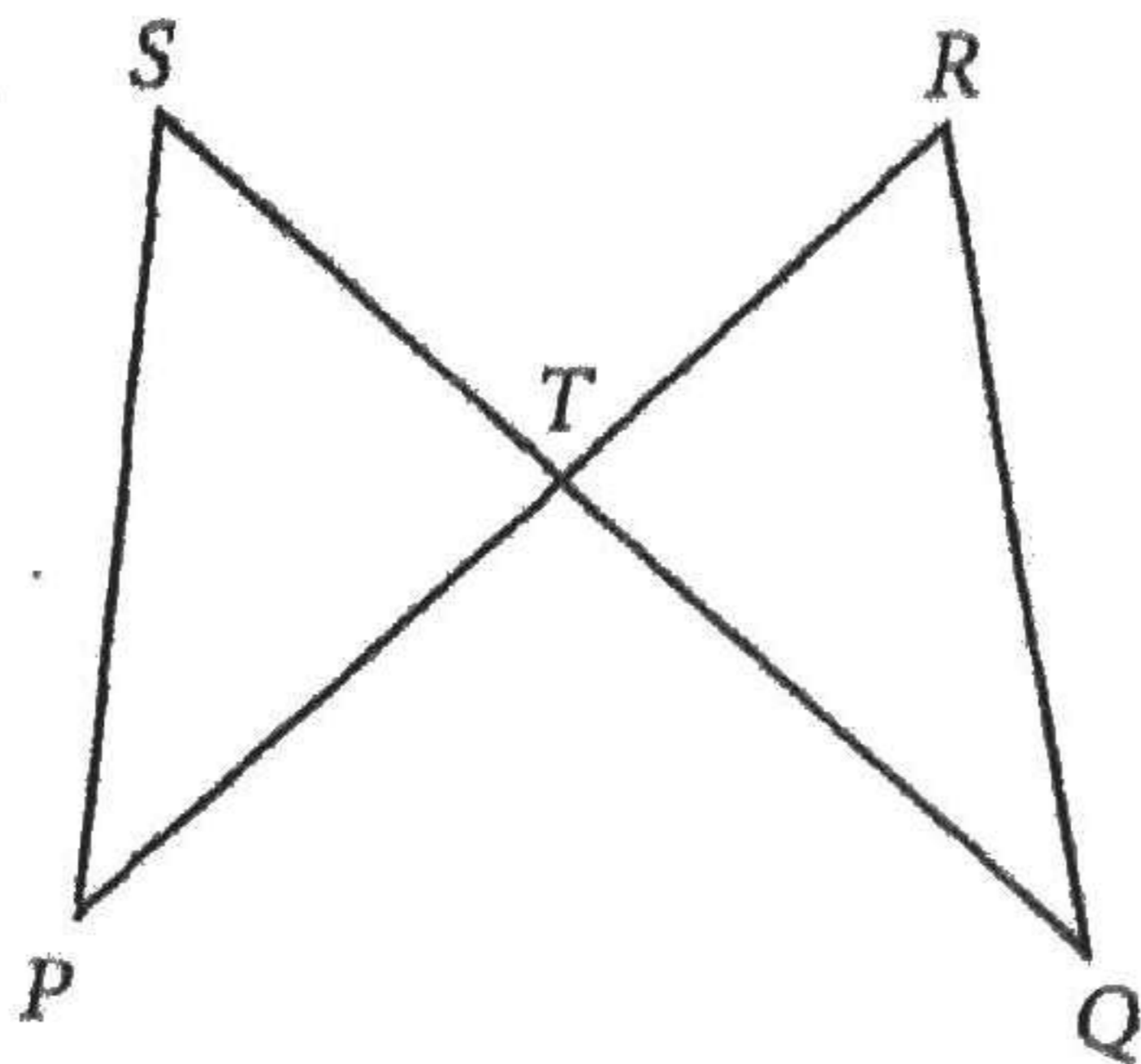
For Exercises 22-24, draw and label each angle.

22. $\angle TAN$

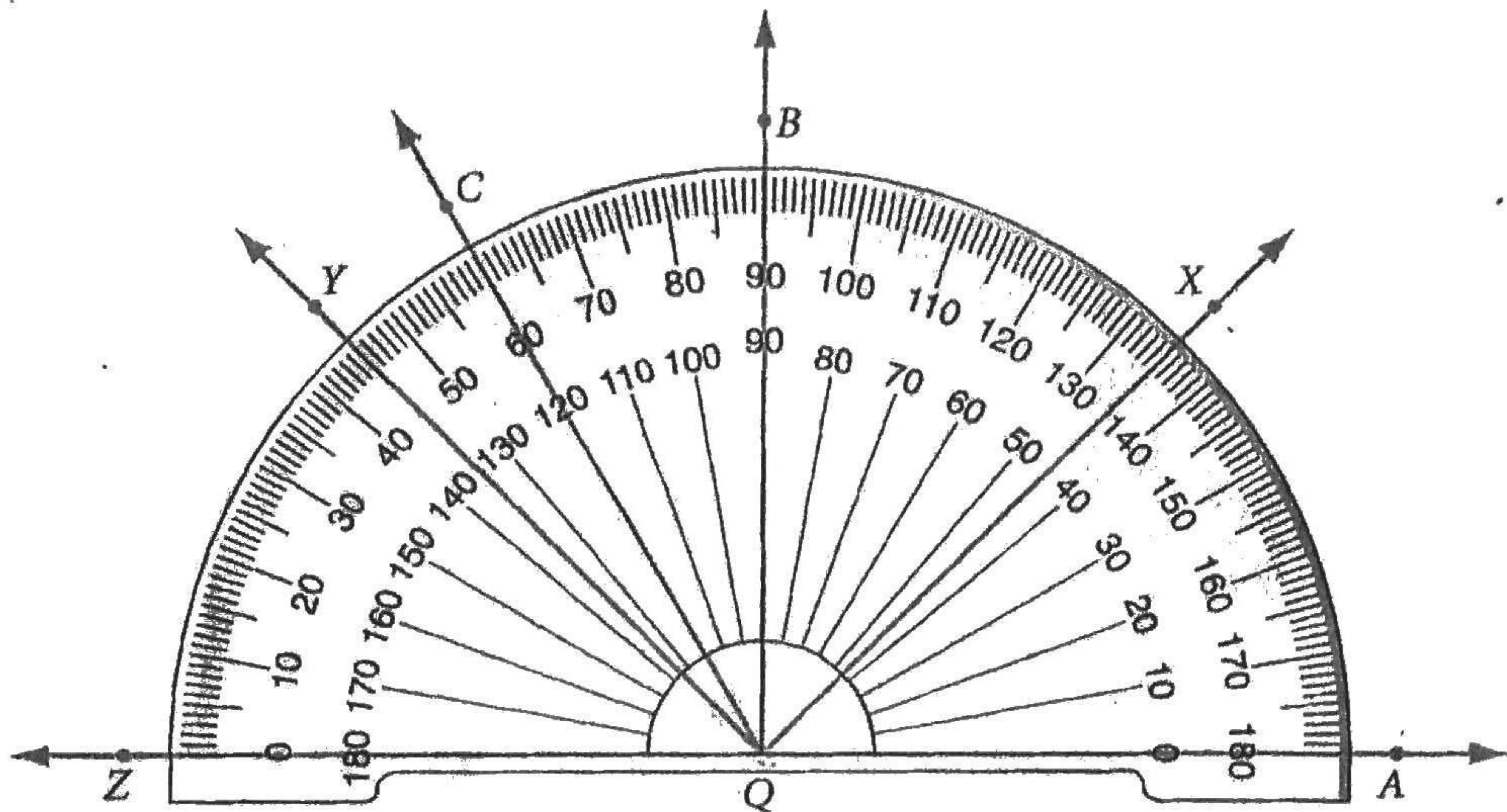
23. $\angle BIG$

24. $\angle SML$

25. For each figure at right, list the angles that you can name using only the vertex letter.

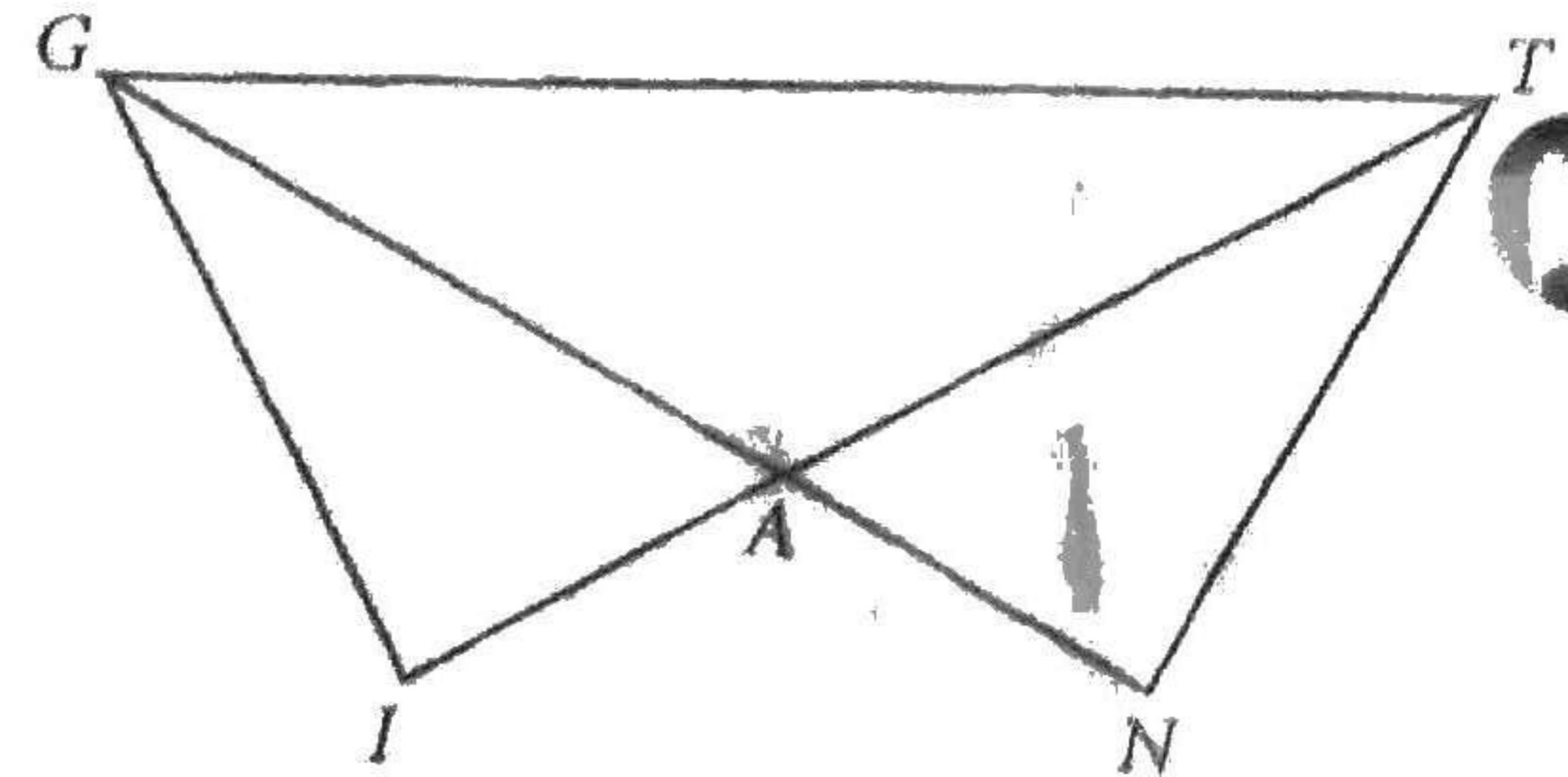


For Exercises 26-33, find the measure of each angle to the nearest degree.



Mark the figure with the given information.

35. $AT = AG$ $\angle AGT \cong \angle ATG$
 $AI = AN$ $GI = TN$



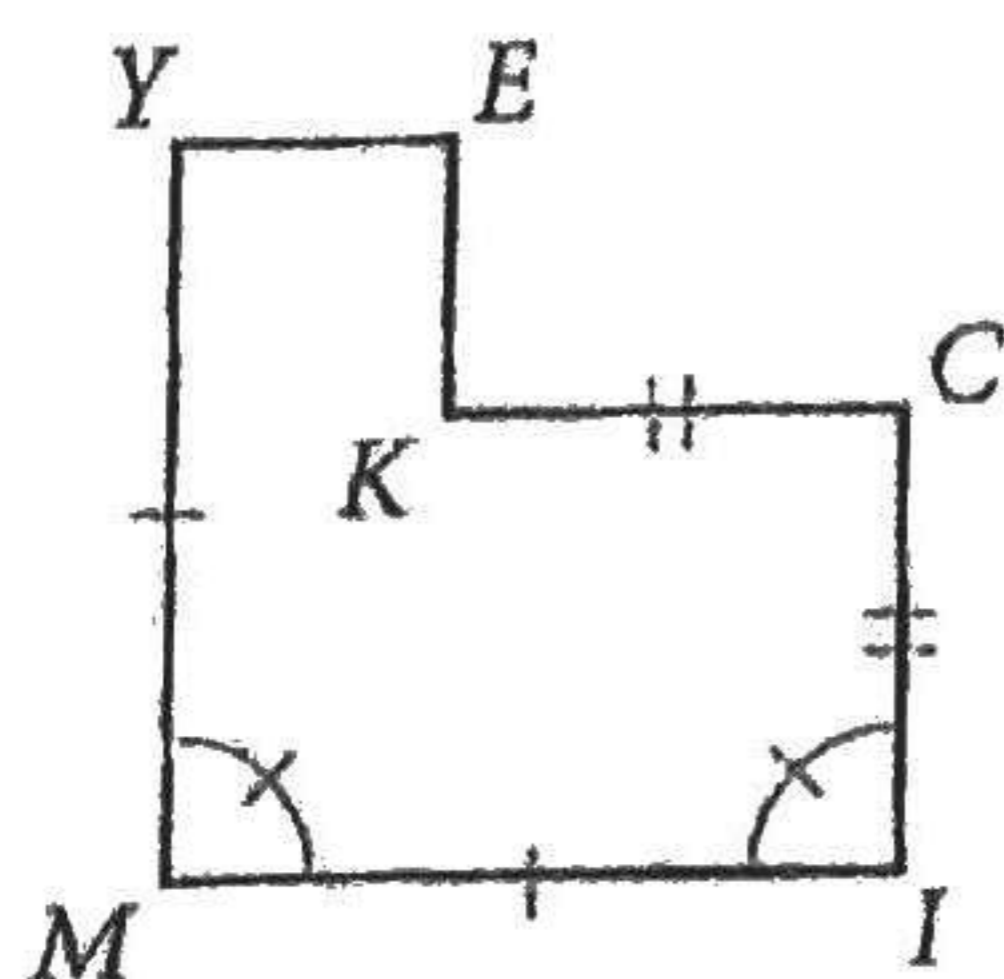
26. $m\angle AQB \approx ?$ 27. $m\angle AQC \approx ?$ 28. $m\angle XQA \approx ?$ 29. $m\angle AQY \approx ?$

30. $m\angle ZQY \approx ?$ 31. $m\angle ZQX \approx ?$ 32. $m\angle CQB \approx ?$ (h) 33. $m\angle XQY \approx ?$

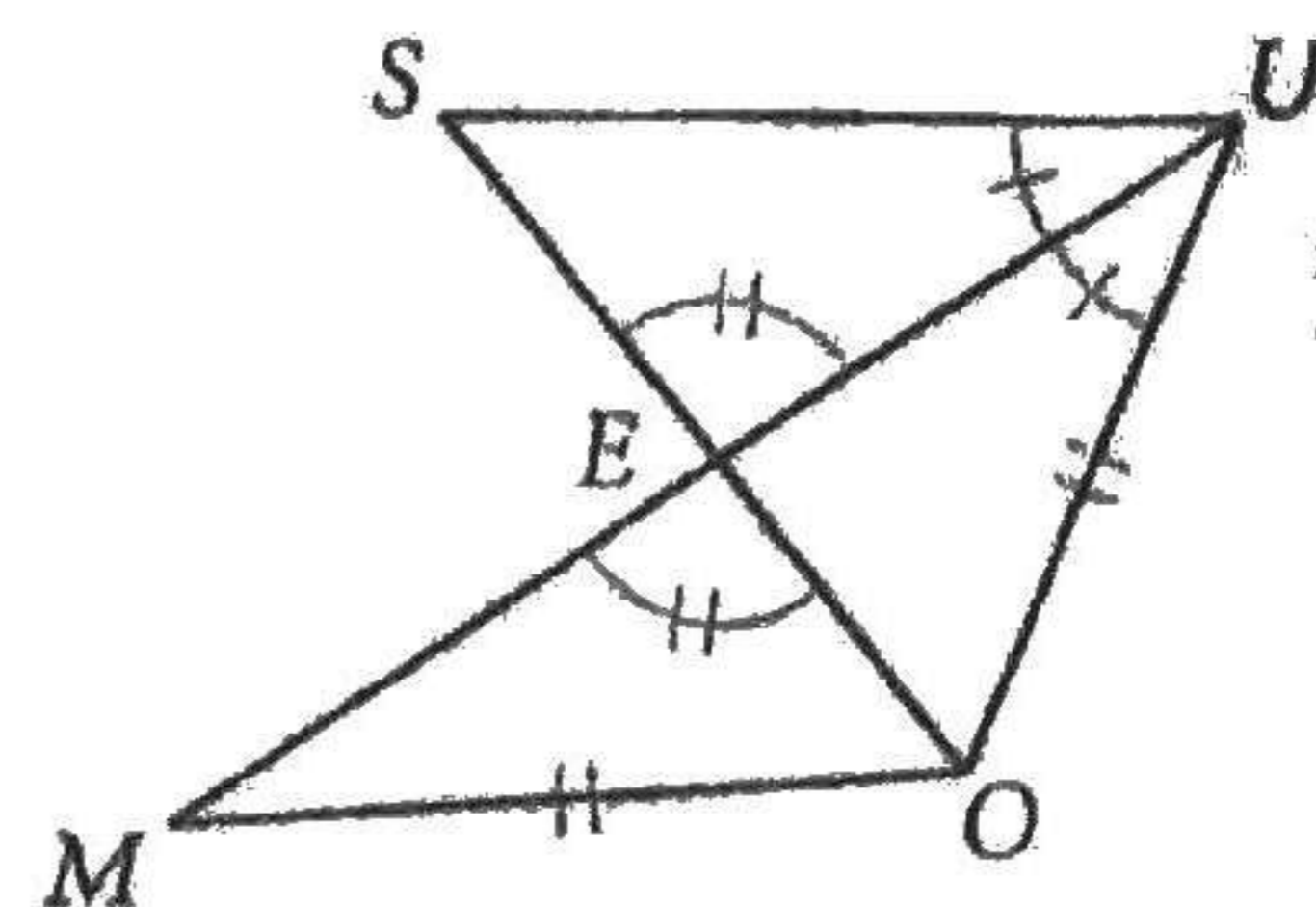
34. Adjacent angles $\angle XQA$ and $\angle XQY$ share a vertex and a side. Taken together they form the larger angle $\angle AQY$. Compare their measures. Does $m\angle XQA + m\angle XQY = m\angle AQY$?

For Exercises 36 and 37, write down what you know from the markings. Do not use your protractor or your ruler.

36. $MI = ?$
 $IC = ?$
 $m\angle M = ?$



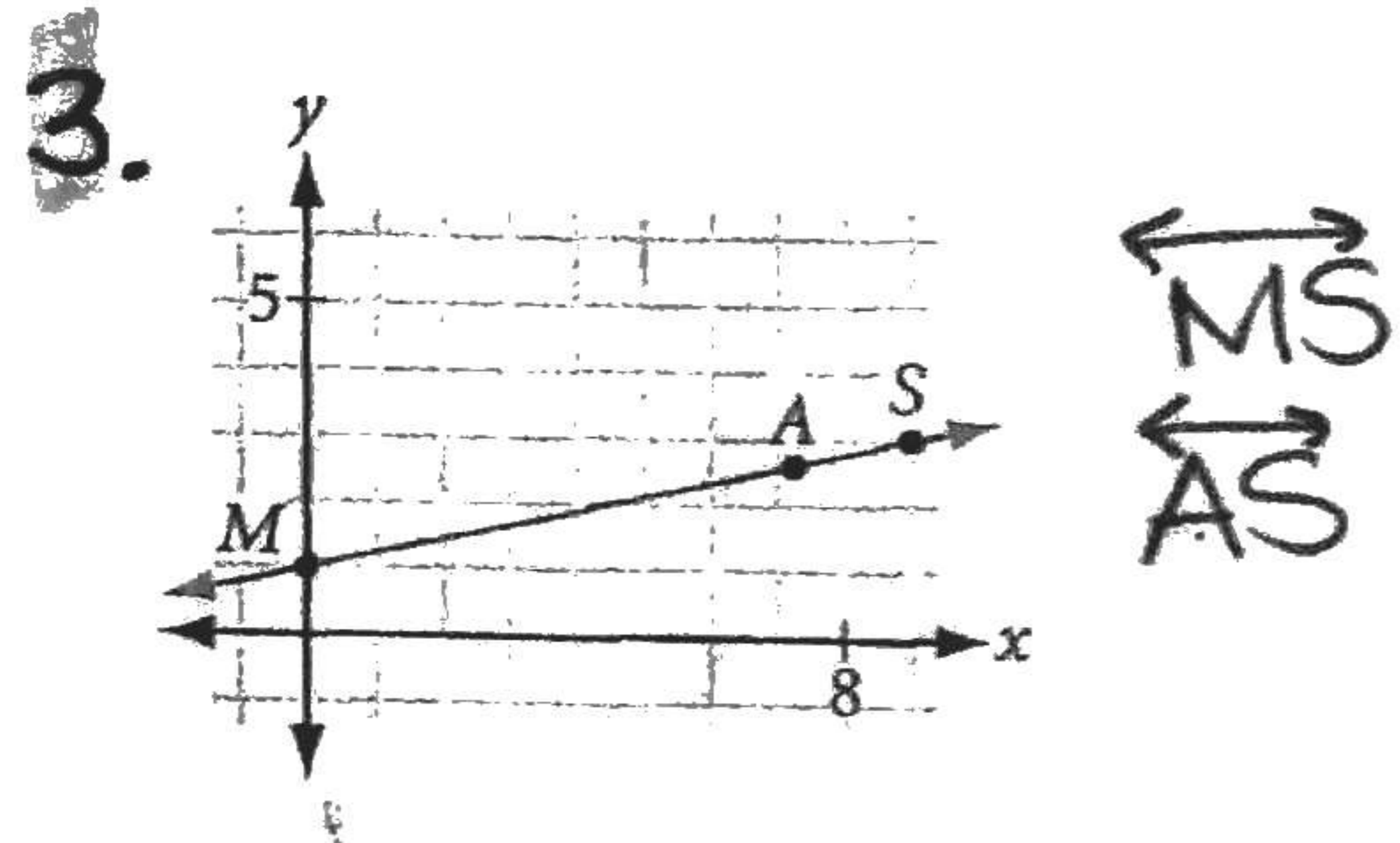
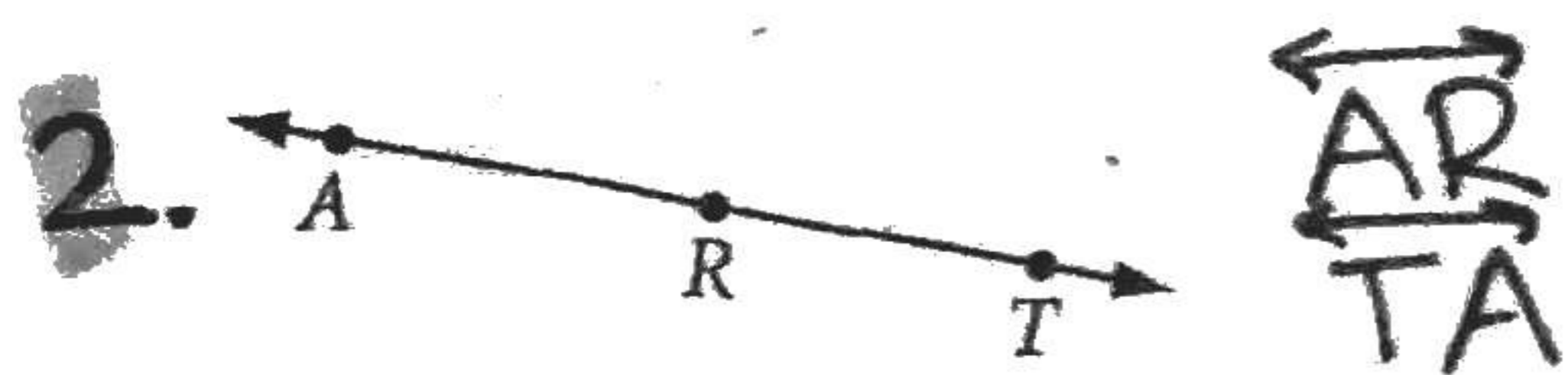
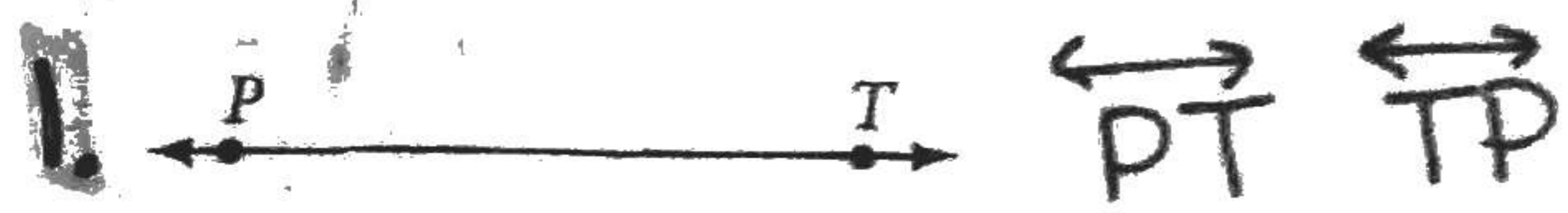
37. $\angle MEO \cong ?$
 $\angle SUE \cong ?$
 $OU = ?$



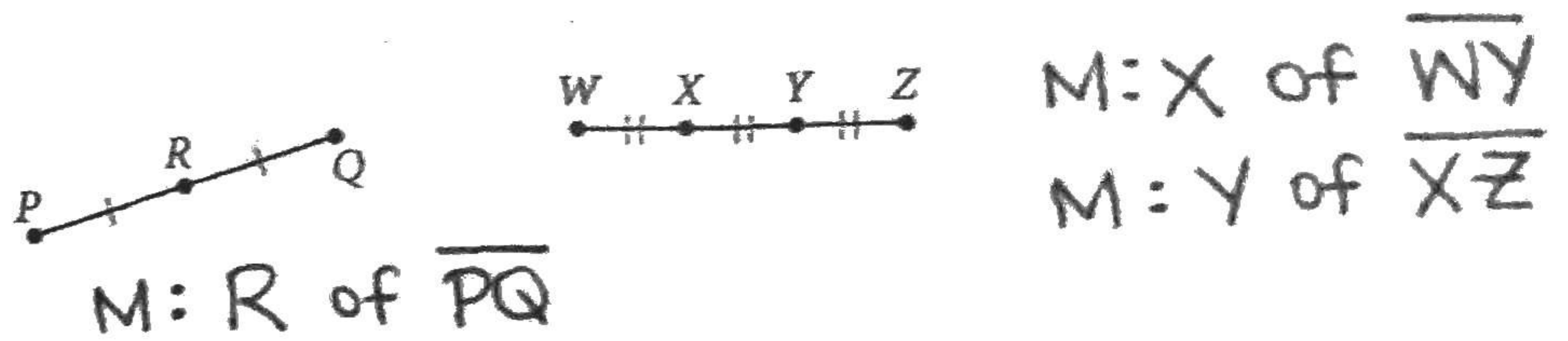
Basics of Geometry

Name: Key

For Exercises 1-3, name each line in two different ways.



4. Name each midpoint and the segment it bisects.



For Exercises 5 and 6, draw and label each line segment.

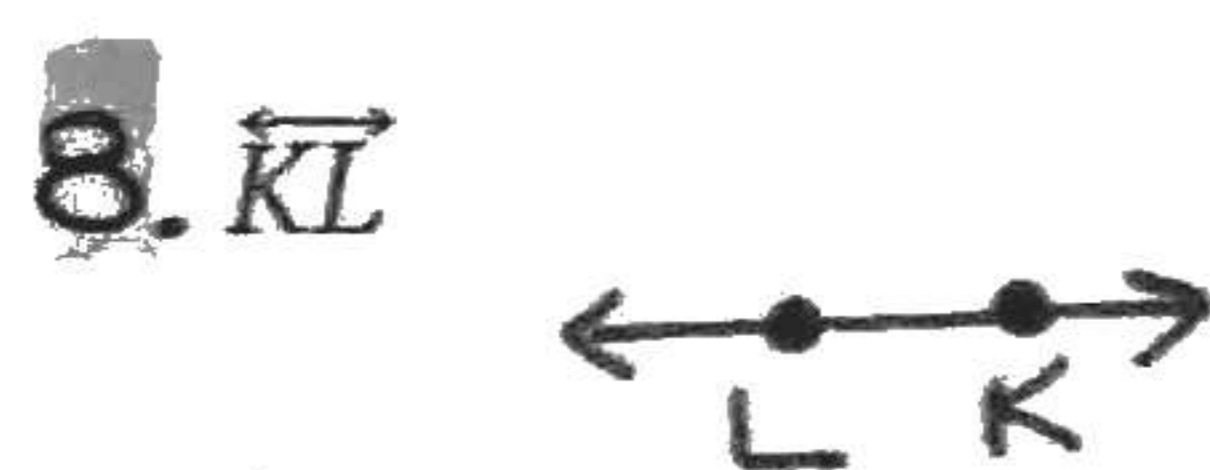
5. \overline{AB}



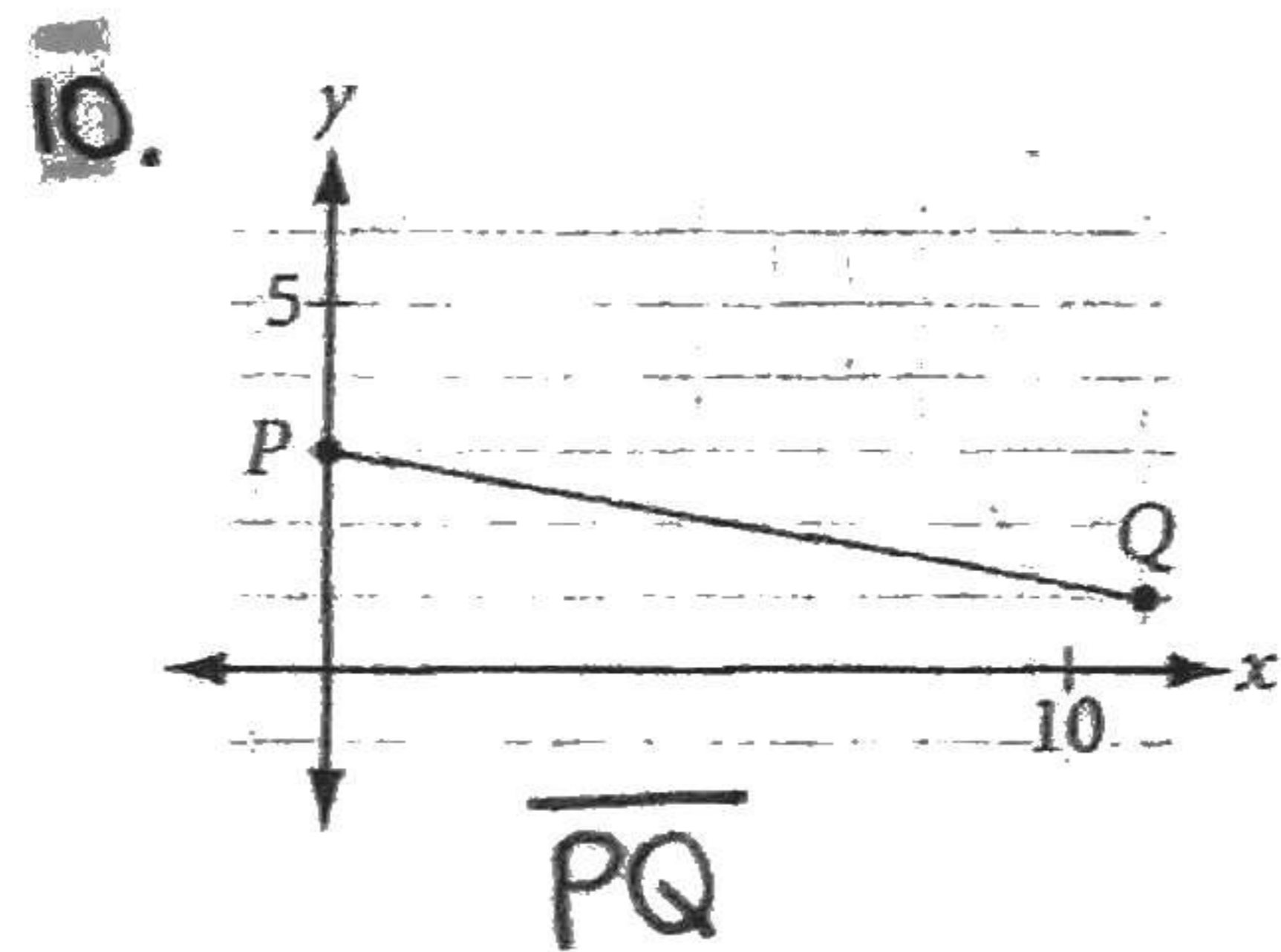
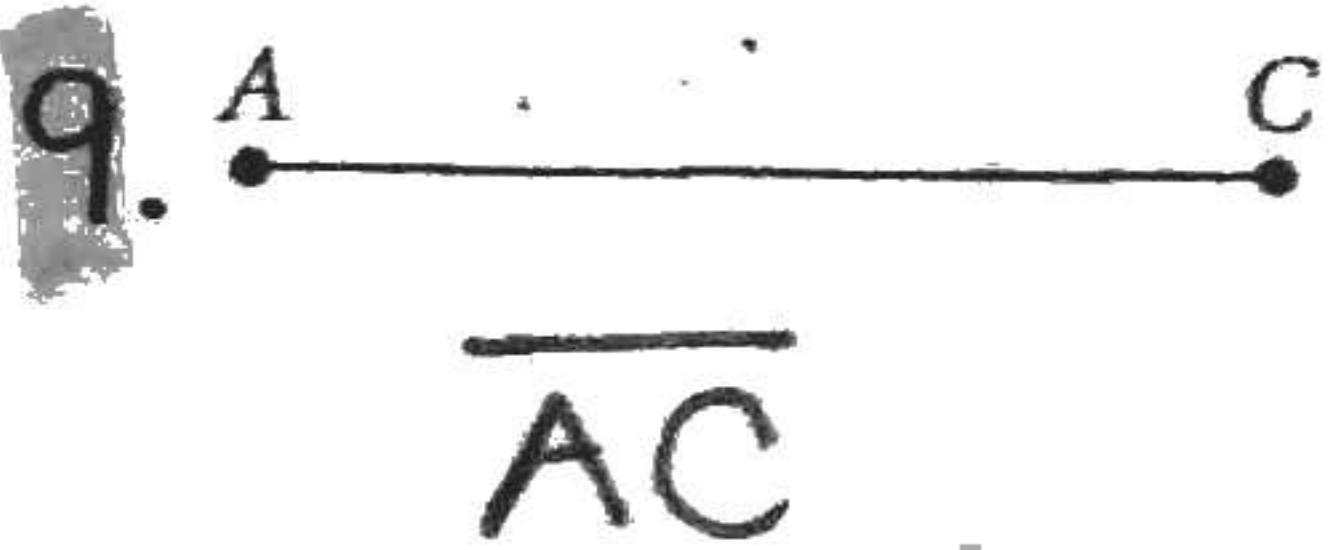
6. \overline{PQ}



For Exercises 7-8, draw two points and label them. Then use a ruler to draw each line. Don't forget to use arrowheads to show that the line extends indefinitely.

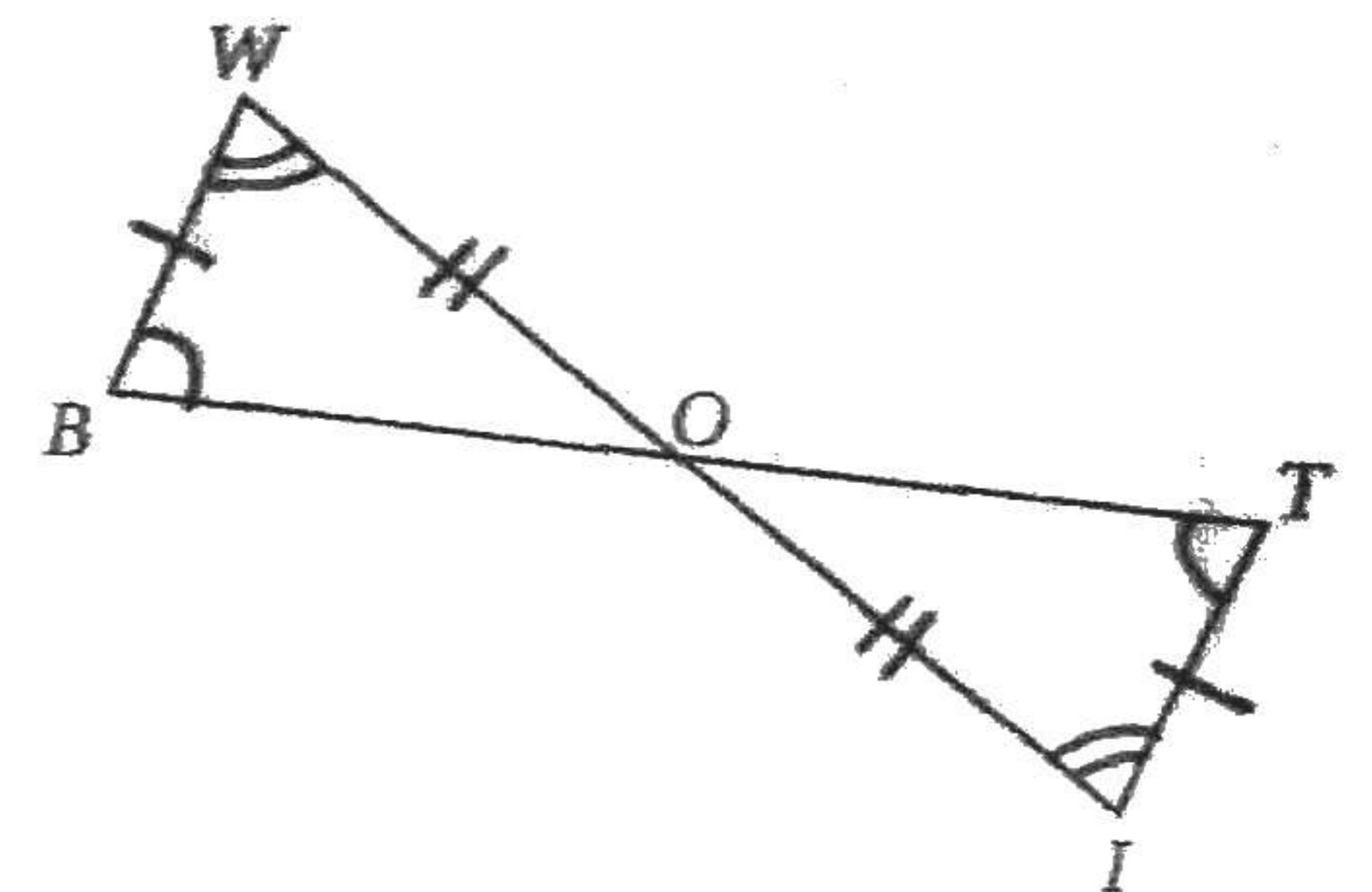


For Exercises 9-10, name each line segment.

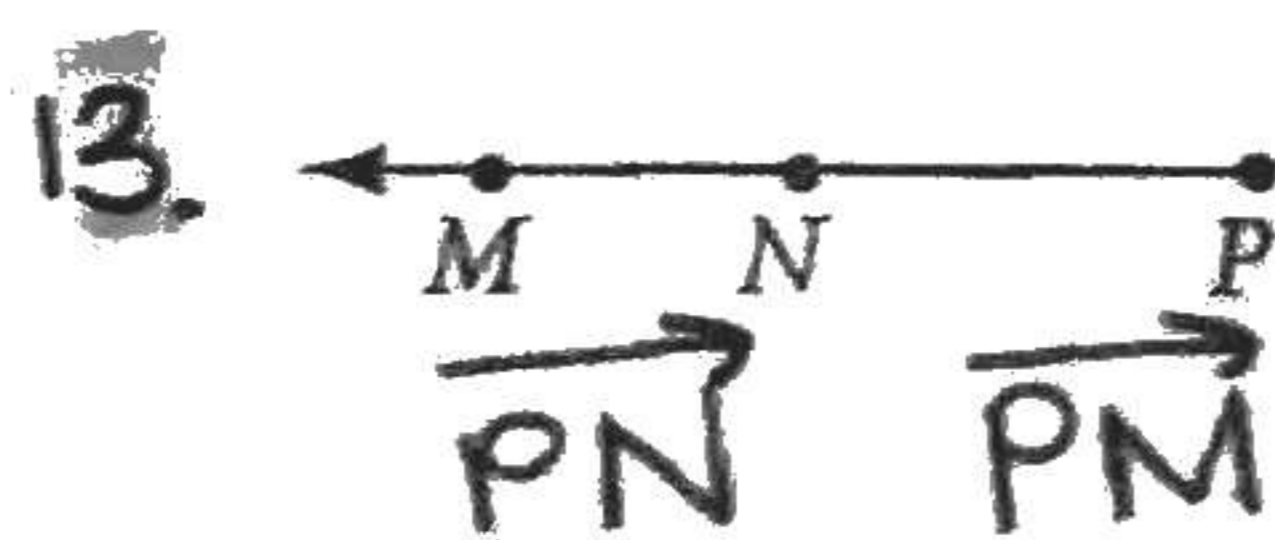
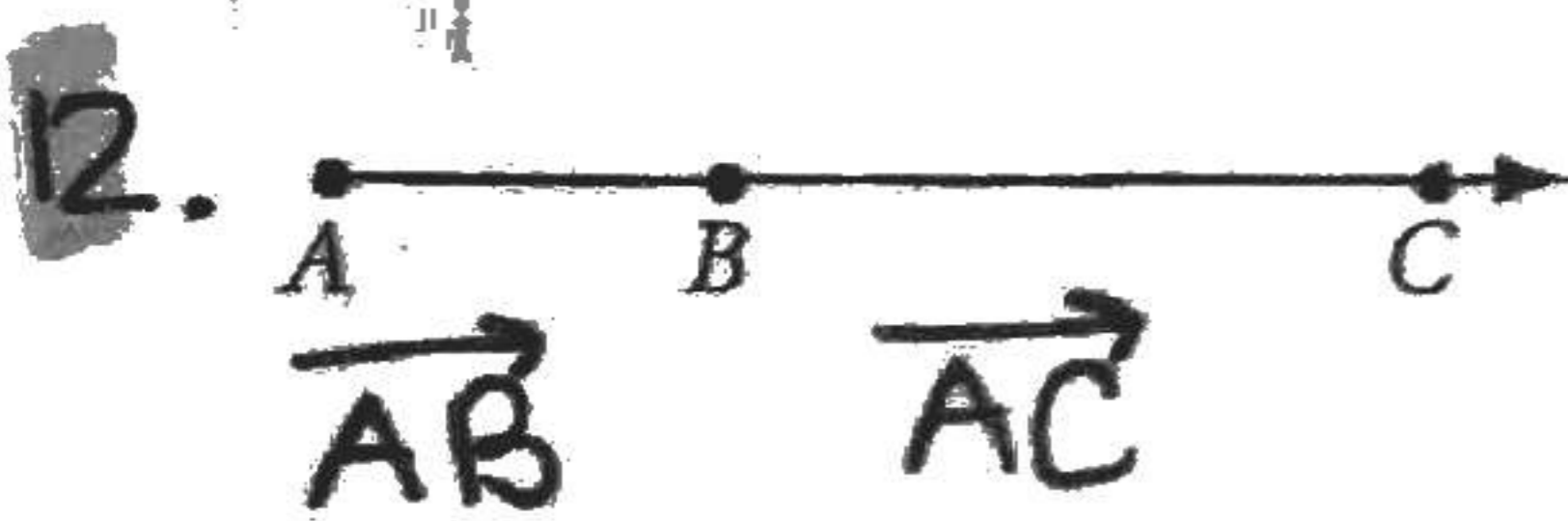


Mark the figure with the given information.

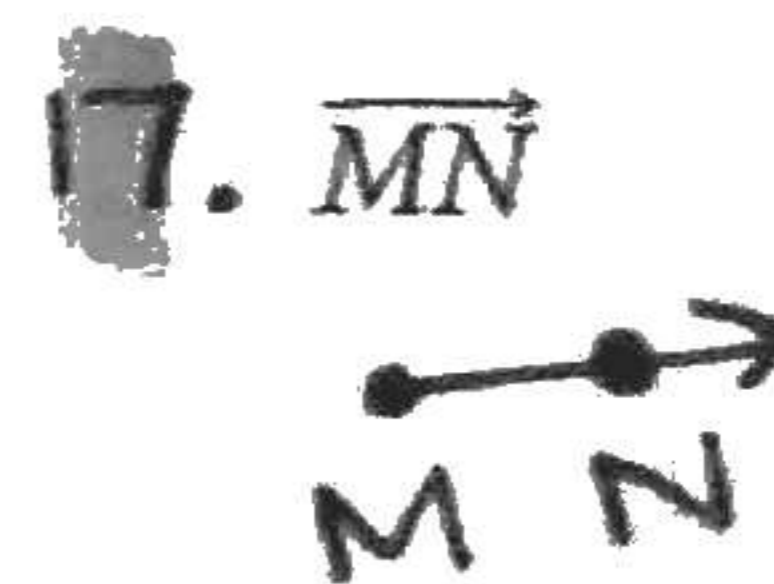
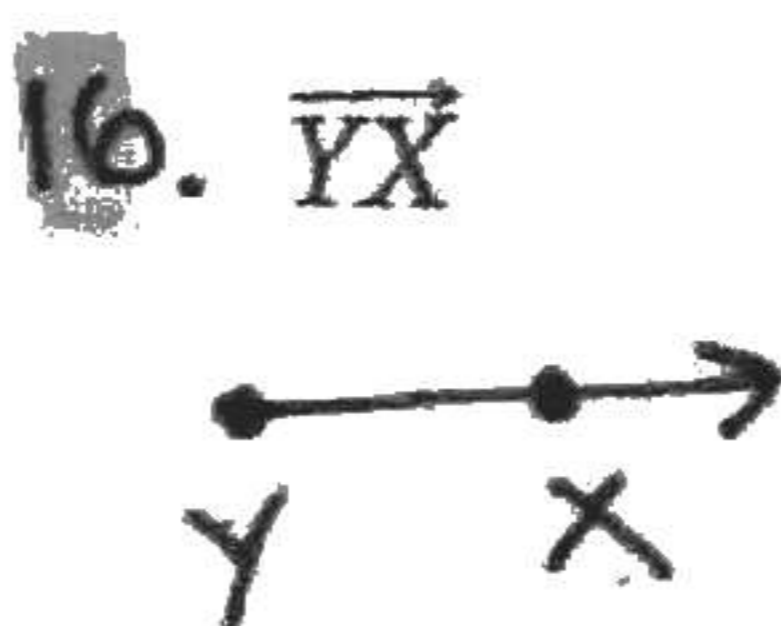
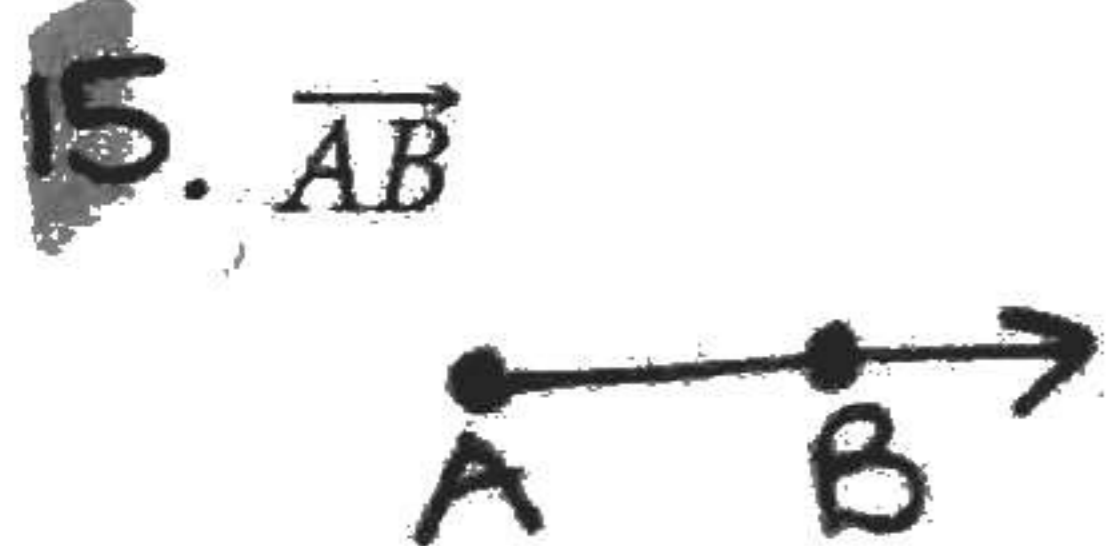
11. $\overline{BW} \cong \overline{TI}$ $\angle WBT \cong \angle ITB$
 $\overline{WO} \cong \overline{IO}$ $\angle BWO \cong \angle TIO$



For Exercises 12-14, name the ray in two different ways.



For Exercises 15-17, draw and label each ray.

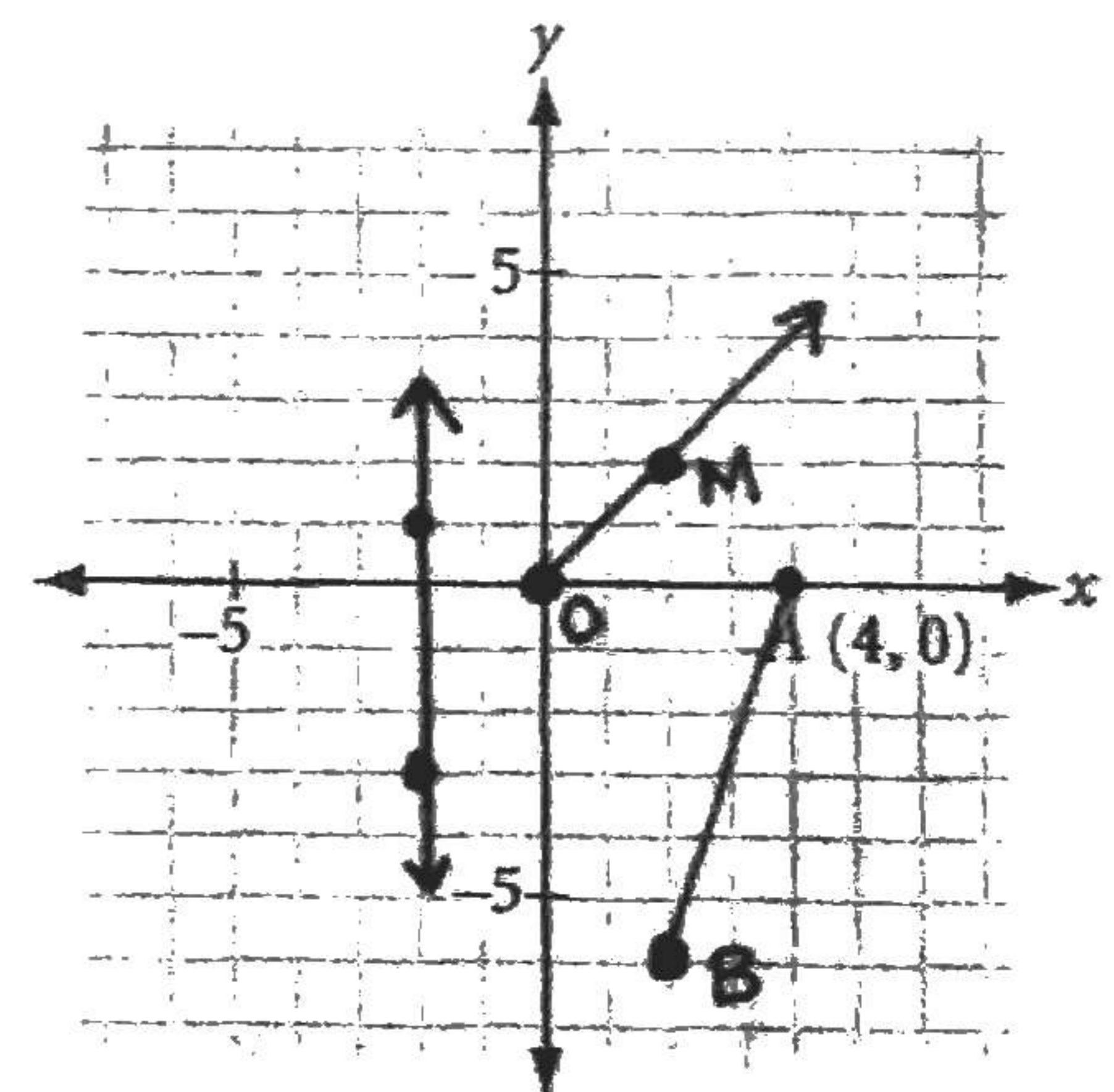


For Exercises 18-20, draw axes on graph paper and locate point A(4, 0) as shown.

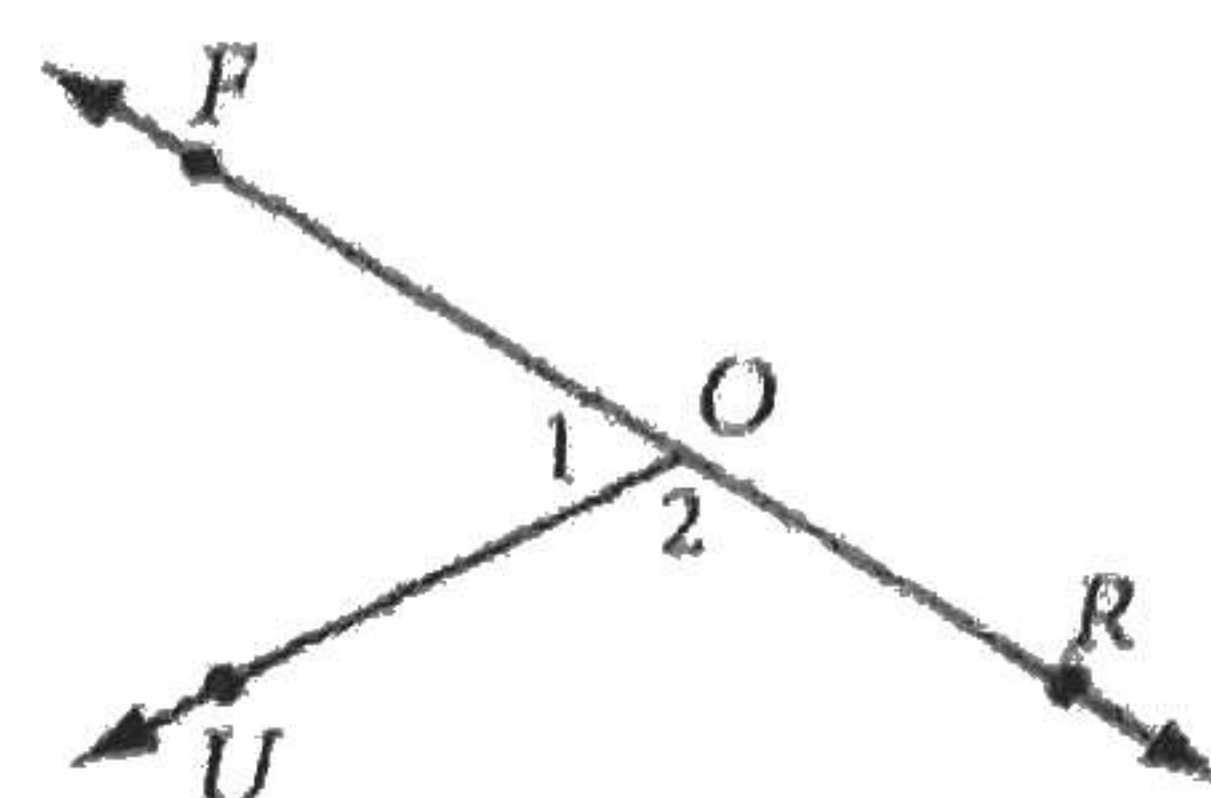
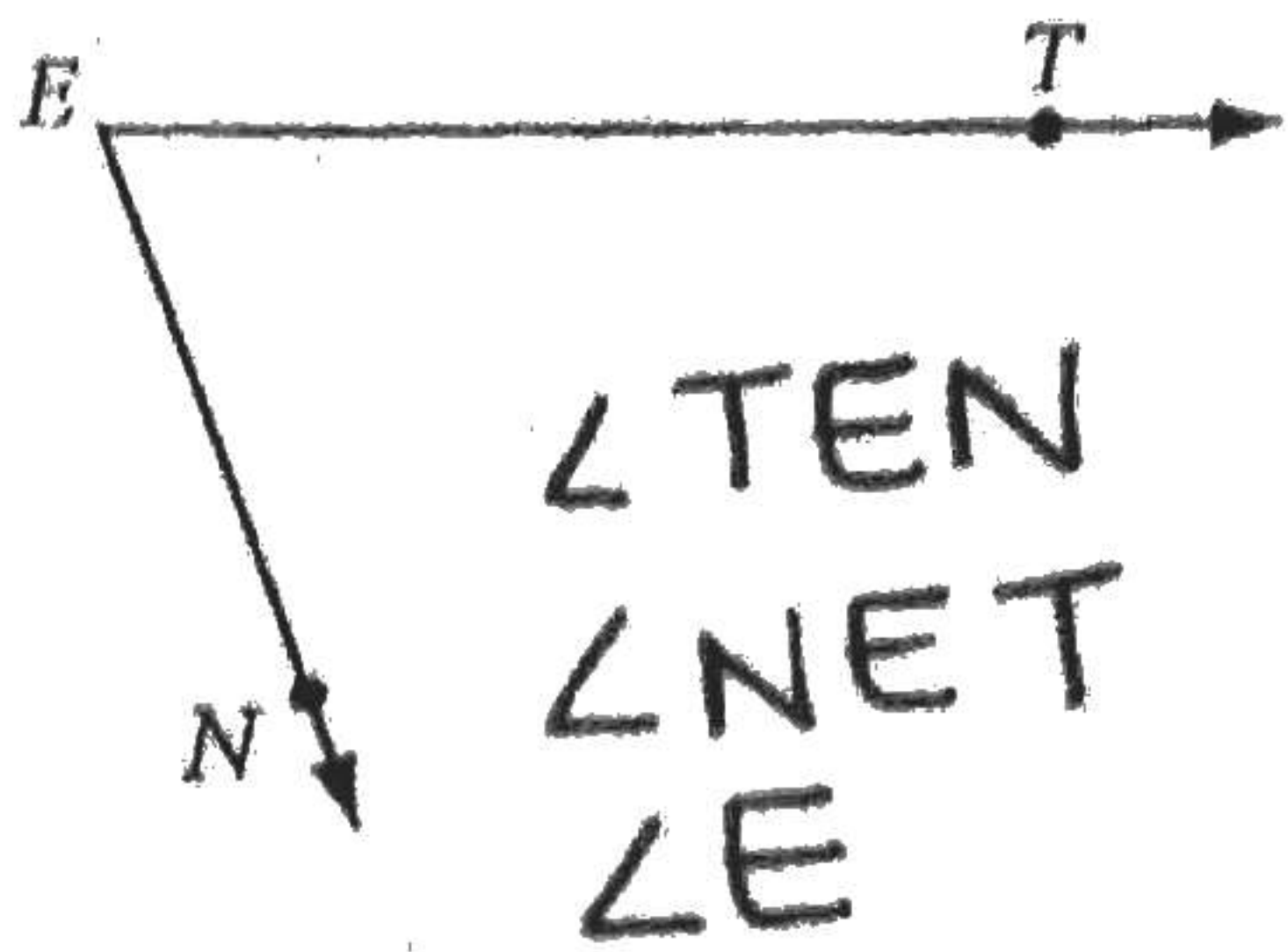
18. Draw \overline{AB} , where point B has coordinates (2, -6).

19. Draw \overline{OM} with endpoint (0, 0) that goes through point M(2, 2).

20. Draw \overline{CD} through points C(-2, 1) and D(-2, -3).



21. Name each angle in three different ways.



$\angle 1$
 $\angle UOF$
 $\angle FOU$

$\angle 2$
 $\angle UOR$
 $\angle ROU$

For Exercises 22-24, draw and label each angle.

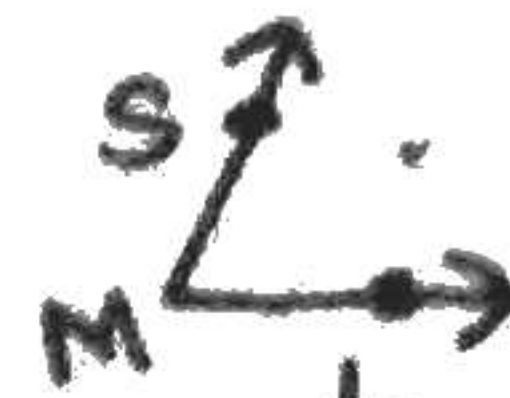
22. $\angle TAN$



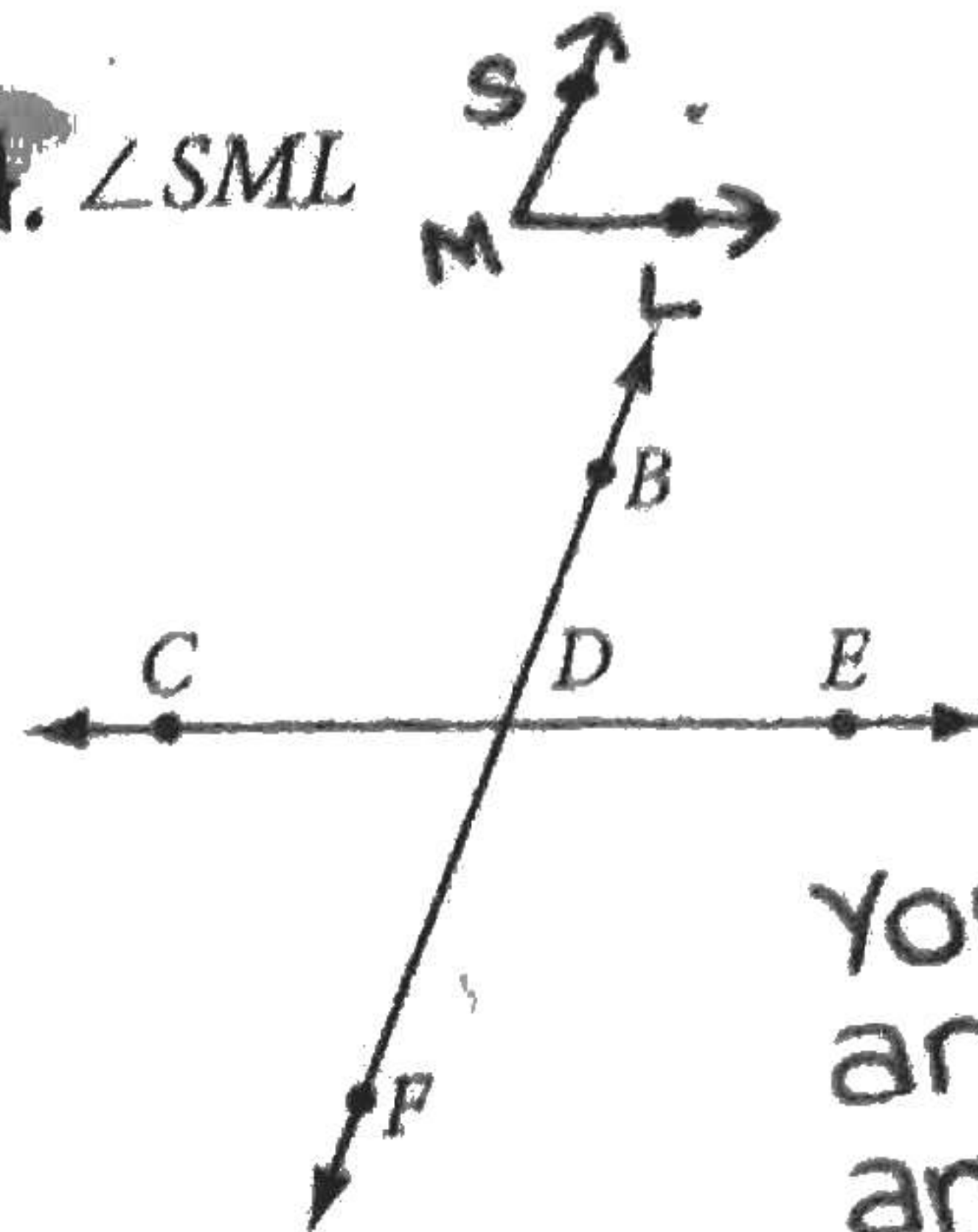
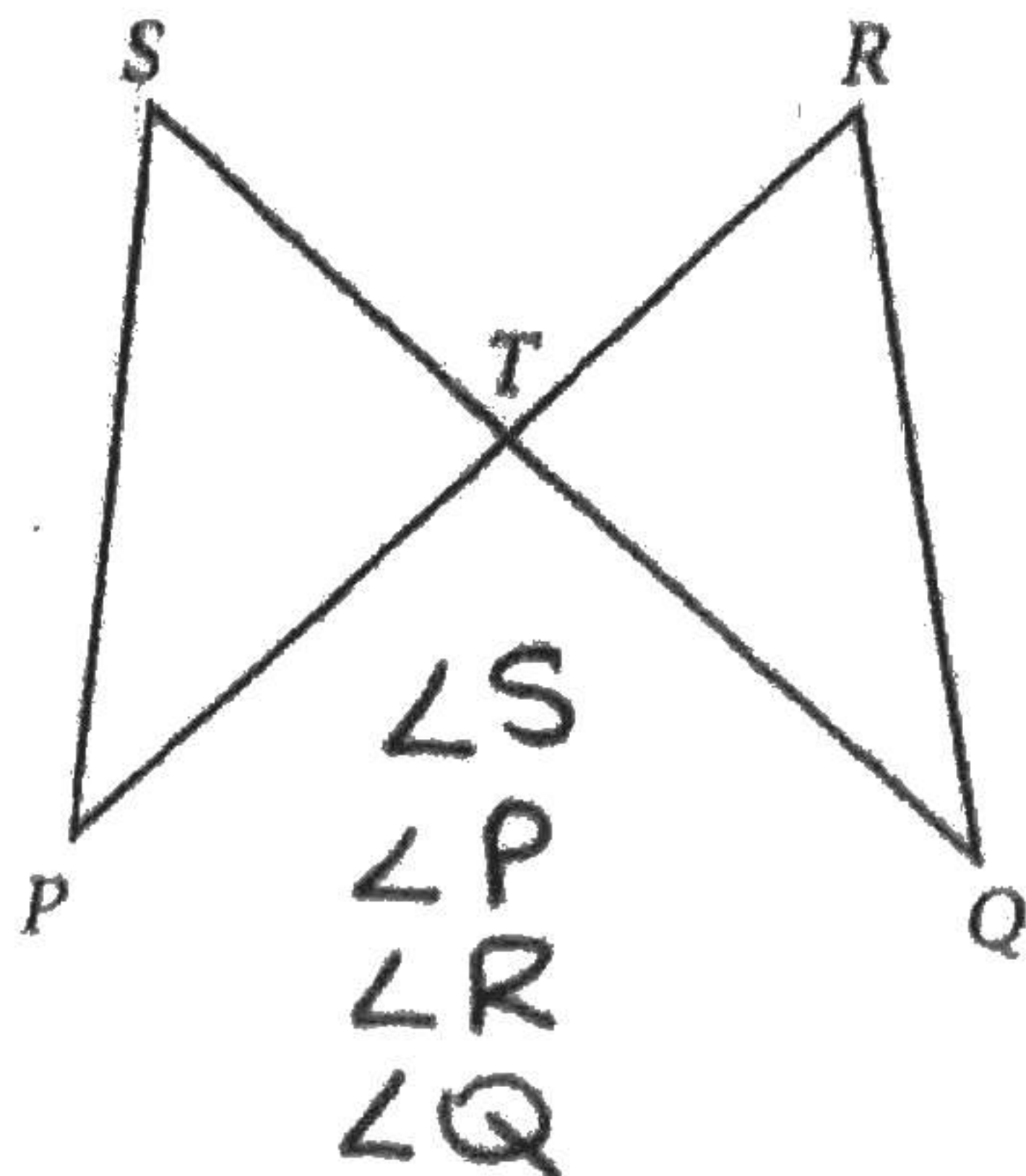
23. $\angle BIG$



24. $\angle SML$

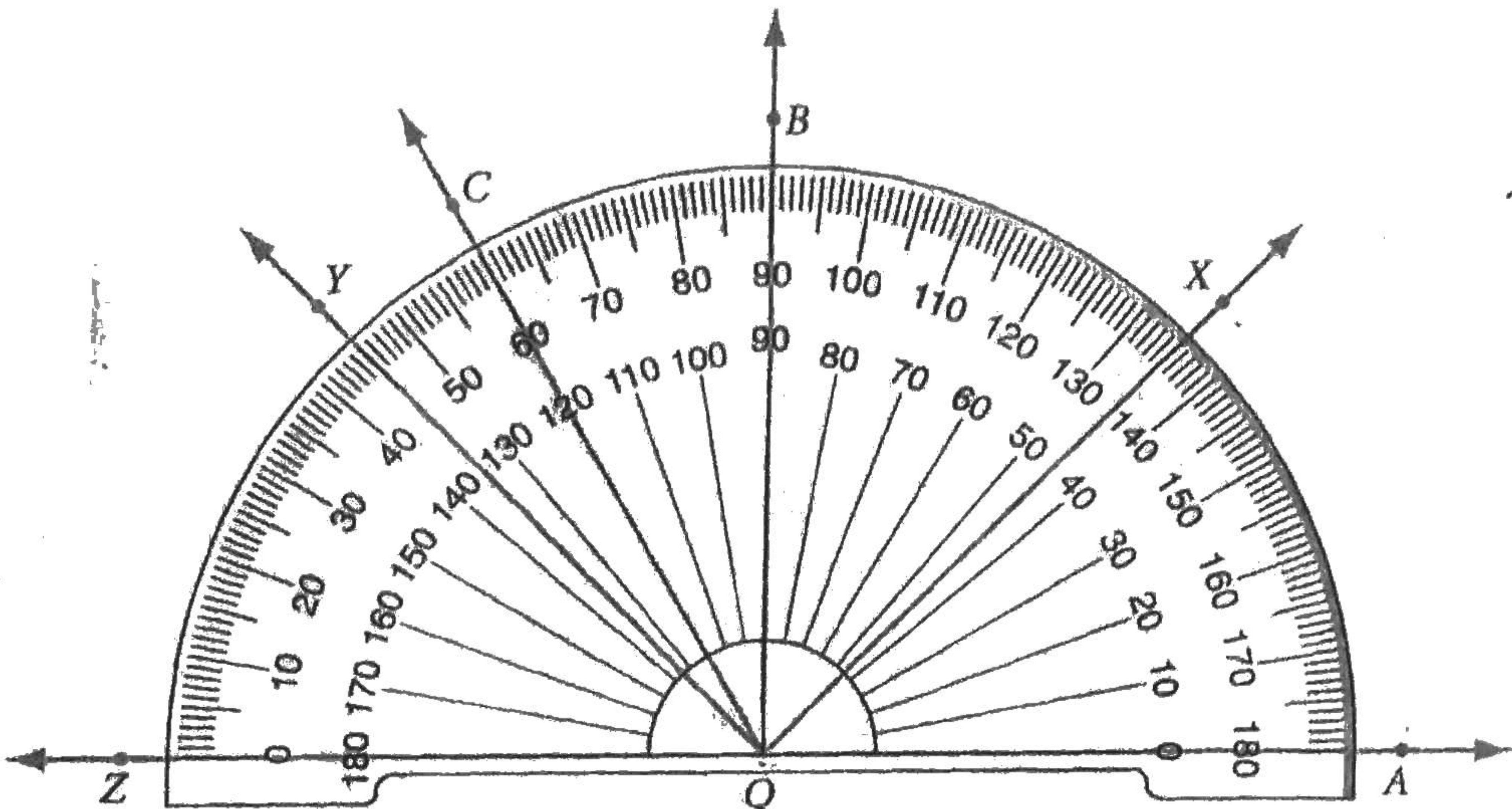


25. For each figure at right, list the angles that you can name using only the vertex letter.



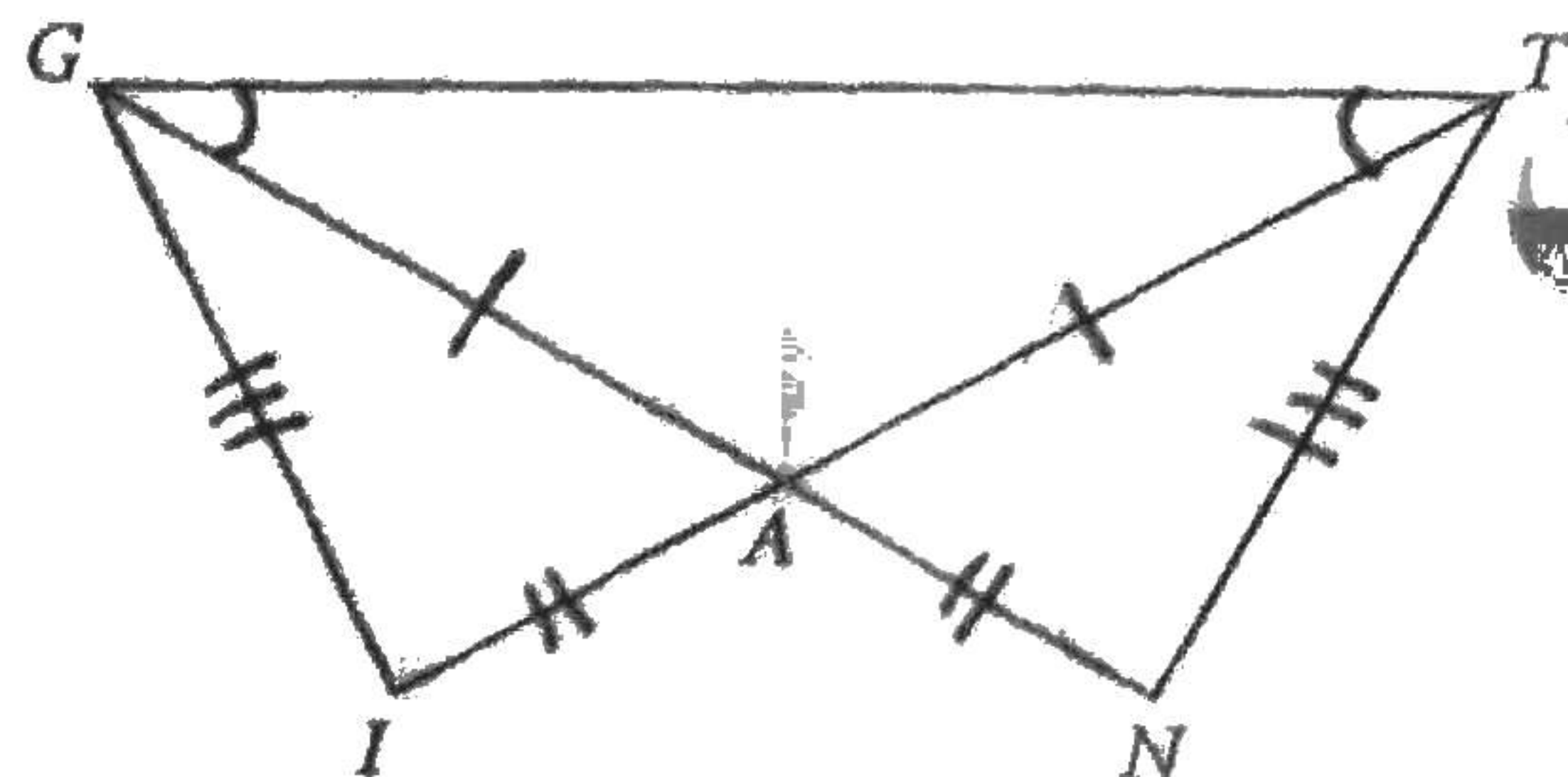
You can't name any of these angle using only the vertex letter.

For Exercises 26-33, find the measure of each angle to the nearest degree.



Mark the figure with the given information.

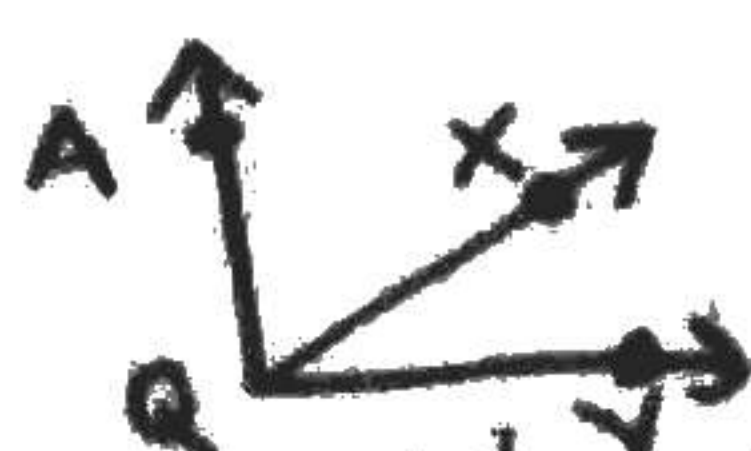
35. $AT = AG$ $\angle AGT \cong \angle ATG$
 $AI = AN$ $GI = TN$



26. $m\angle AQB \approx ? 90^\circ$ 27. $m\angle AQC \approx ? 120^\circ$ 28. $m\angle XQA \approx ? 45^\circ$ 29. $m\angle AQY \approx ? 135^\circ$

30. $m\angle ZQY \approx ? 45^\circ$ 31. $m\angle ZQX \approx ? 135^\circ$ 32. $m\angle CQB \approx ? 30^\circ$ 33. $m\angle XQY \approx ? 90^\circ$

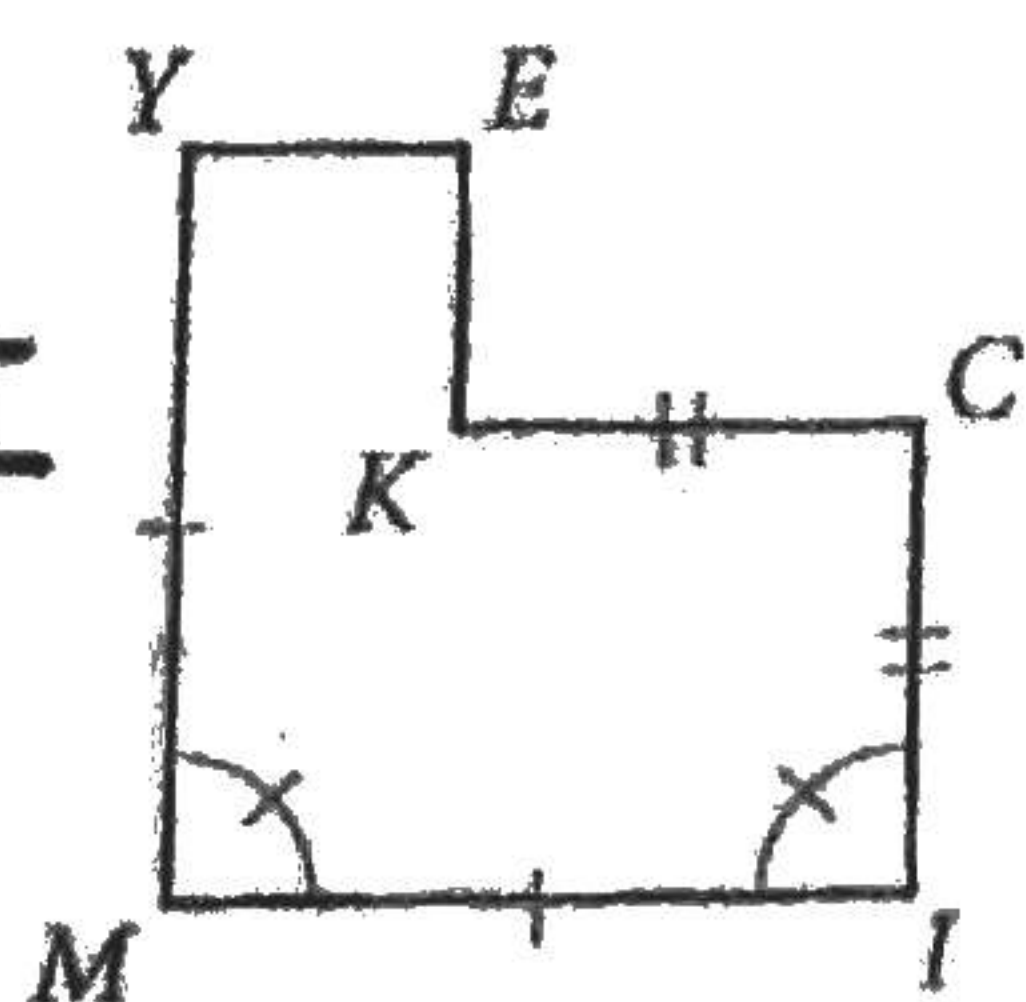
34. Adjacent angles $\angle XQA$ and $\angle XQY$ share a vertex and a side. Taken together they form the larger angle $\angle AQY$. Compare their measures. Does $m\angle XQA + m\angle XQY = m\angle AQY$?



Yes!

For Exercises 36 and 37, write down what you know from the markings. Do not use your protractor or your ruler.

36. $MI = ? MY$
 $IC = ? KC$
 $m\angle M = m\angle I$



37. $\angle MEO \cong ? \angle LUES$
 $\angle SUE \cong ? \angle LOUE$
 $OU = ? OM$

