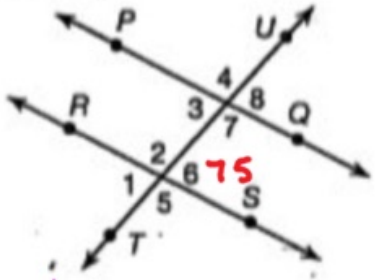
In the figure shown at right, $\overleftrightarrow{PQ} \parallel \overleftrightarrow{RS}$. Use the figure for Exercises 1–7.



1. Name all interior angles. 2, 3, 6, 7

2. Name all exterior angles. 1, 5, 4, 8

3. Name the transversal. $\overline{UT}$

4. Name two pairs of alternate interior angles. 2 & 7 3 & 6

5. Name two pairs of alternate exterior angles. 1 & 8 5 & 4

6. Name four pairs of corresponding angles.

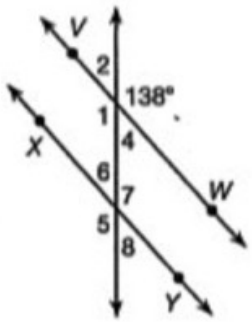
   1 & 3, 2 & 4 5 & 7 6 & 8

7. If $m\angle 6 = 75°$, find each angle measure.

   $m\angle 1 =$ 75° $m\angle 2 =$ 105° $m\angle 3 =$ 75 $m\angle 4 =$ 105

   $m\angle 5 =$ 105 $m\angle 7 =$ 105 $m\angle 8 =$ 75

In the figure on the right, $\overleftrightarrow{VW} \parallel \overleftrightarrow{XY}$. Use the figure to find the measure of each angle.



8. $m\angle 1 =$ 138

9. $m\angle 2 =$ 42

10. $m\angle 4 =$ 42

11. $m\angle 5 =$ 138

12. $m\angle 7 =$ 138

13. $m\angle 8 =$ 42

Use figure at right to answer Exercises 9–16.
$\overleftrightarrow{JK} \parallel \overleftrightarrow{LM}$. If $m\angle 2 = 70°$, find each angle measure.

9. $m\angle 4$ 70

10. $m\angle 7$ 70

11. $m\angle 5$ 70

12. $m\angle 3$ 110

Match each pair of angles with the angle classification.

13. $\angle 6$ and $\angle 8$ C

14. $\angle 3$ and $\angle 6$ A

15. $\angle 4$ and $\angle 7$ D

16. $\angle 1$ and $\angle 8$ B

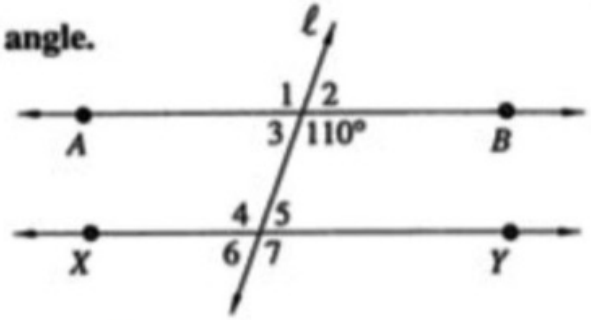
A. alternate interior angles

B. alternate exterior angles

C. corresponding angles

D. vertical angles

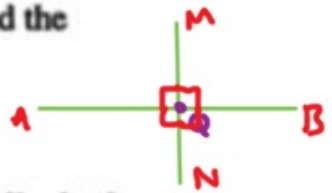
In the figure at the right, $\overleftrightarrow{AB} \parallel \overleftrightarrow{XY}$. Find the measure of each angle.



1. $\angle 1$ 110
2. $\angle 2$ 70
3. $\angle 3$ 70
4. $\angle 4$ 110
5. $\angle 5$ 70
6. $\angle 6$ 70

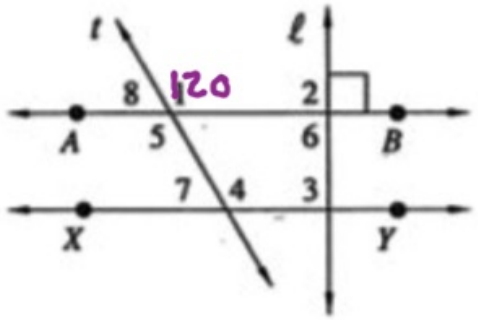
7. Lines $\overleftrightarrow{MN}$ and $\overleftrightarrow{AB}$ intersect at Q. Also, $\overleftrightarrow{MN} \perp \overleftrightarrow{AB}$. Find the measures of $\angle MQA$, $\angle NQA$, $\angle MQB$, and $\angle NQB$.

All are 90°

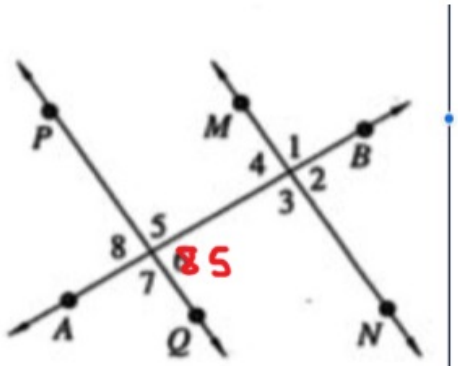


In the figure at the right, $\overleftrightarrow{AB} \parallel \overleftrightarrow{XY}$, and $m\angle 1 = 120°$. Tell whether each statement is true or false.

8. $m\angle 2 = 90°$ T
9. $\overleftrightarrow{XY} \perp t$ T
10. $m\angle 3 = 60°$ F
11. $m\angle 4 = 120°$ T
12. $m\angle 5 = 120°$ T
13. $m\angle 8 = 120°$ F
14. $t \parallel \ell$ F
15. $m\angle 7 = 60°$ T
16. $t \perp \ell$ F
17. $m\angle 6 = 120°$ F



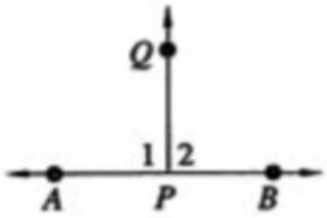
In the figure at the right, $\overleftrightarrow{MN} \parallel \overleftrightarrow{PQ}$ and the measure of $\angle 6$ is 85°. Find the measure of each angle.



18. $\angle 7$ 95 19. $\angle 3$ 95 20. $\angle 2$ 85

21. $\angle 8$ 85 22. $\angle 5$ 95 23. $\angle 4$ 85

24. In the figure at the right, $m\angle 1 = 89°$ and $m\angle 2 = 91°$. Is $\overrightarrow{PQ}$ perpendicular to $\overleftrightarrow{AB}$?



No, perpendicular angles are exactly 90°