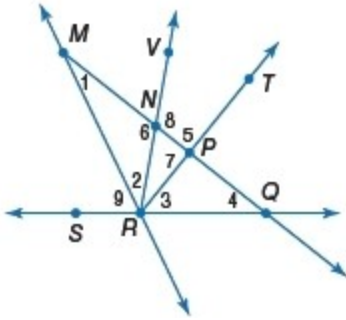


1-4 Angle Measure

Name the vertex of each angle.



12. $\angle 4$

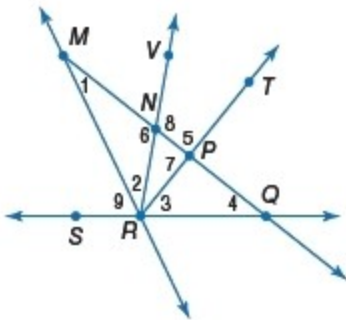
SOLUTION:

Q

ANSWER:

Q

Name the sides of each angle.



16. $\angle TPQ$

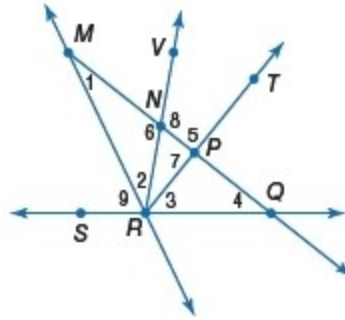
SOLUTION:

$\overline{PT}, \overline{PQ}$

ANSWER:

$\overline{PT}, \overline{PQ}$

For Exercises 24–29, use the figure below.



28. Name a pair of angles that share exactly one point.

SOLUTION:

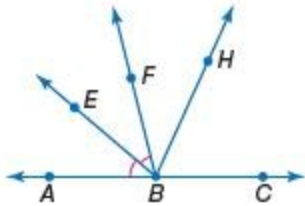
Sample answer: $\angle 6$ and $\angle 8$ share the vertex point N .

ANSWER:

Sample answer: $\angle 6, \angle 8$

1-4 Angle Measure

ALGEBRA In the figure, \overline{BA} and \overline{BC} are opposite rays. \overline{BH} bisects $\angle EBC$.



37. If $m\angle ABE = 2n + 7$ and $m\angle EBF = 4n - 13$, find $m\angle ABE$.

SOLUTION:

Since $\angle ABE \cong \angle EBF$, $m\angle ABE = m\angle EBF$.
So, $2n + 7 = 4n - 13$.

$$\begin{array}{ll}
 m\angle ABE = m\angle EBF & \\
 2n + 7 = 4n - 13 & \text{Substitution.} \\
 2n - 4n + 7 = 4n - 4n - 13 & \text{Subtract } 4n \text{ from each side.} \\
 -2n + 7 = -13 & \text{Simplify.} \\
 -2n + 7 - 7 = -13 - 7 & \text{Subtract 7 from each side.} \\
 -2n = -20 & \text{Simplify.} \\
 \frac{-2n}{-2} = \frac{-20}{-2} & \text{Divide each side by } -2. \\
 n = 10 & \text{Simplify.}
 \end{array}$$

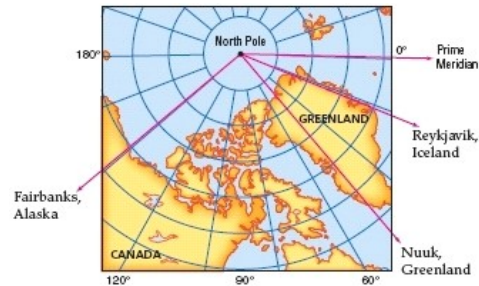
Substitute.

$$\begin{aligned}
 m\angle ABE &= 2n + 7 \\
 &= 2(10) + 7 \\
 &= 27
 \end{aligned}$$

ANSWER:

27

43. **MAPS** Estimate the measure of the angle formed by each city or location listed, the North Pole, and the Prime Meridian.



- Nuuk, Greenland
- Fairbanks, Alaska
- Reykjavik, Iceland
- Prime Meridian

SOLUTION:

- The measure of the angle formed by the Prime meridian, North Pole, and Nuuk, Greenland is about 50.
- The measure of the angle formed by the Prime meridian, North Pole, and Fairbanks, Alaska is about 140
- The measure of the angle formed by the Prime meridian, North Pole, and Reykjavik, Iceland is about 20.
- The measure of the angle formed by the Prime meridian, North Pole, and Prime Meridian is 0.

ANSWER:

- about 50
- about 140
- about 20
- 0