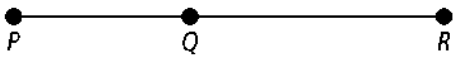
BECA / Dr. Huson / Geometry First & last names: _____

1.1 Classwork & HW: Segment Addition Postulate

For Exercises 1–5, use the figure at the right.



1. If $PQ = 7$ and $QR = 10$, then $PR =$ ☐.

2. If $PQ = 20$ and $QR = 22$, then $PR =$ ☐.

3. If $PR = 25$ and $PQ = 12$, then $QR =$ ☐.

4. If $PR = 19$ and $QR = 12$, then $PQ =$ ☐.

5. If $PR = 10$ and $PQ = 4$, then $QR =$ ☐.

6. Reasoning Points *A, Q,* and *O* are collinear. $AO = 10$, $AQ = 15$, and $OQ = 5$. What does the line have to look like and what is the position of each point? Draw it.

For Exercises 7 and 8, use the figure at the right.

7. Given: $ST = 3x + 3$ and $TU = 2x + 9$.

a. What is the value of *ST?*

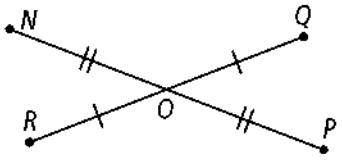
b. What is the value of *TU?*

8. Given: $ST = x + 3$ and $TU = 4x - 6$.

a. What is the value of *ST?*

b. What is the value of *SU?*

Use the diagram at the right for Exercises 9–10.



9. If $NO = 17$ and $NP = 5x - 6$, find the value of *x.* Then find *NP* and *OP.*

10. If $RO = 6 + x$ and $OQ = 2x + 1$, find the value of *x.* Then find *RO, OQ,* and *RQ.*