Unit 3: Parallel lines and transversals   Name:
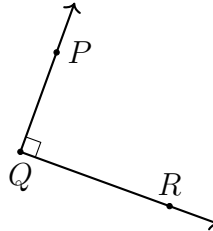
18 October 2022

3.2 Homework: Mixed review

1. Demonstrate your ability to classify angles and use standard terminology.

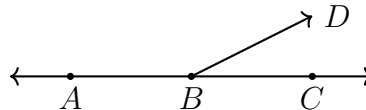   (a) Which of the following are true with respect to the angle, m$\angle PQR$?

   True   False   It is a right angle

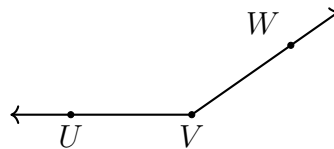   True   False   It's measure is 180°

   True   False $\overrightarrow{QP}$ is perpendicular to $\overrightarrow{QR}$

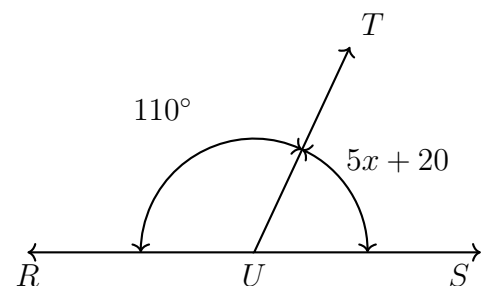   (b) What is the sum of the degree measures of this linear pair, $\angle ABD$ and $\angle CBD$?

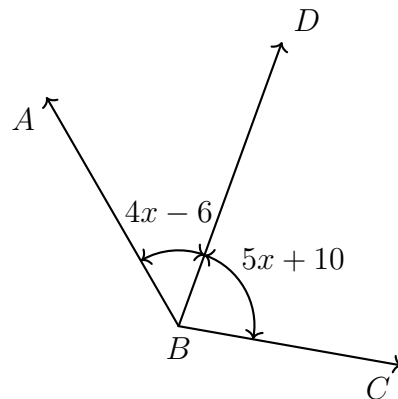   (c) The given angle $\angle UVW$ is which of the following: acute, obtuse, or right?

2. A linear pair is formed by two angles, m$\angle RUT = 110°$ and m$\angle SUT = 5x + 20$.
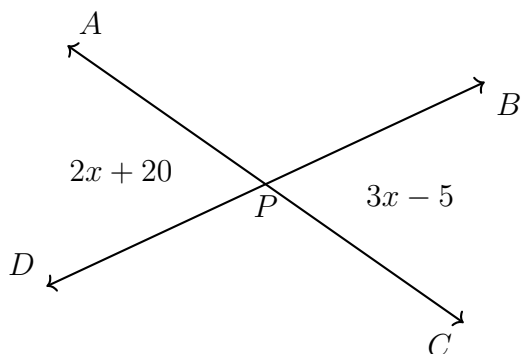
   Write an equation, then solve for x.

3. Given m∠$ABD = 4x - 6$, m∠$DBC = 5x + 10$, and $m\angle ABC = 130°$, as shown.

   Model the situation with an equation, then solve for x. Check your solution for full credit.

4. Given vertical angles, m∠$APD = 3x - 5$, m∠$BPC = 2x + 20$, as shown.

   Find x. Check your solution for full credit.

5. In the diagram shown, $\overrightarrow{BD} \perp \overleftrightarrow{ABC}$ with m∠$DBE = 7x - 1°$ and m∠$EBC = 6x°$. Find x. Show the check for full credit.