

Name:

### 3.2 Homework: Mixed review

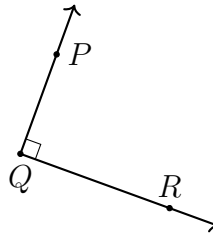
1. Demonstrate your ability to classify angles and use standard terminology.

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

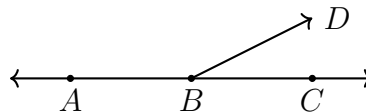
True    False    It is a right angle

True    False    It's measure is  $180^\circ$

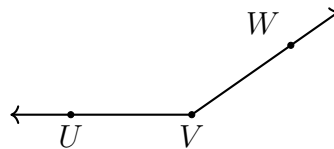
True    False     $\overrightarrow{QP}$  is perpendicular to  $\overrightarrow{QR}$



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

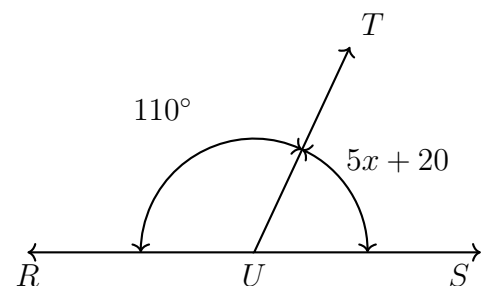


(c) The given angle  $\angle UVW$  is which of the following: acute, obtuse, or right?



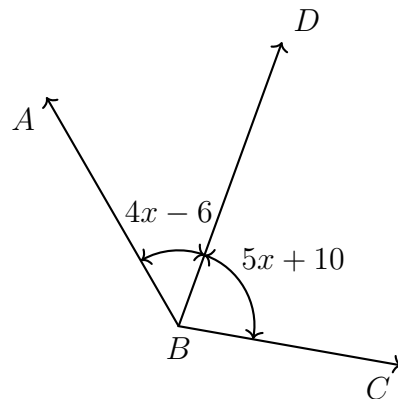
2. A linear pair is formed by two angles,  $m\angle RUT = 110^\circ$  and  $m\angle SUT = 5x + 20$ .

Write an equation, then solve for  $x$ .



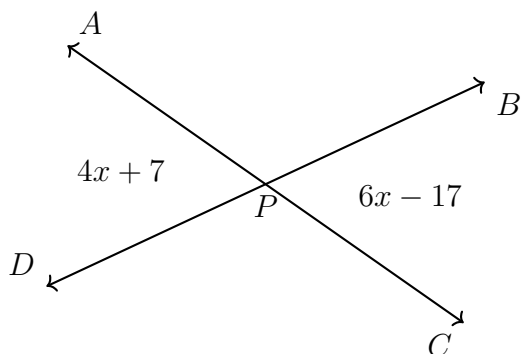
3. Given  $m\angle ABD = 4x - 6$ ,  $m\angle DBC = 5x + 10$ , and  $m\angle ABC = 130^\circ$ , as shown.

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



4. Given vertical angles,  $m\angle APD = 4x + 7$ ,  $m\angle BPC = 6x - 17$ , as shown.

Find  $x$ . Check your solution for full credit.



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

