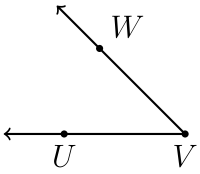
3.5 ReQuiz review, angle addition

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

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

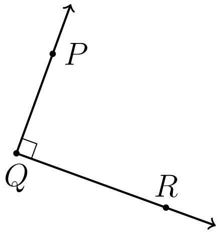


   (b) Which of the following are true with respect to the angle, $m\angle PQR$?

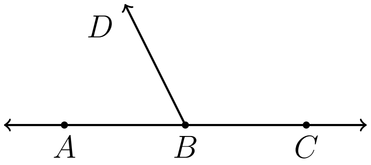
   True False It is an acute angle

   True False It's measure is 90°

   True False $\overrightarrow{QP} \perp \overrightarrow{QR}$

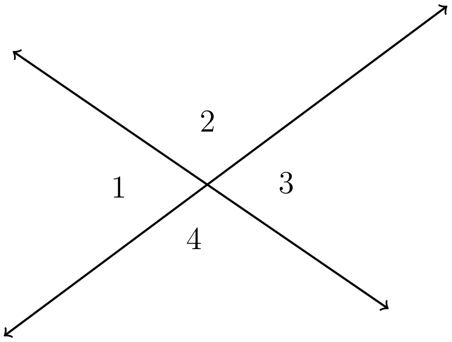


   (c) What is sum of the degree measures of this linear pair, $\angle ABD$ and $\angle CBD$?



2. As shown below, two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$.

   (a) Name a pair of vertical angles.



   (b) Given $m\angle 3 = 80^\circ$, write down $m\angle 1$.

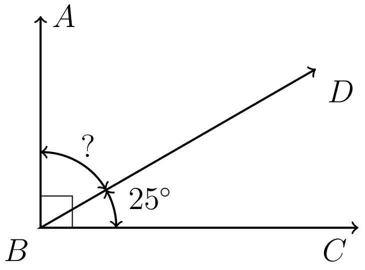
   (c) Find $m\angle 4$.

Angle addition situations

3. Apply the Angle Addition postulate. Write and equation to support your work.

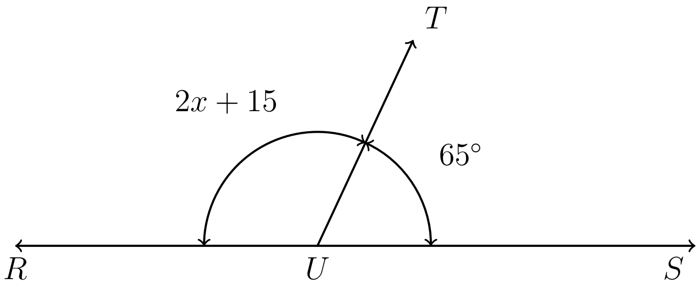
   Given $m\angle CBD = 25°$, $m\angle ABC = 90°$.

   Find $m\angle ABD$.



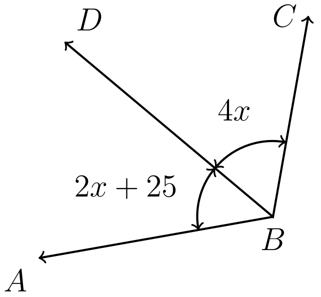
4. A linear pair is formed by two angles, $m\angle RUT = 2x + 15$ and $m\angle SUT = 65°$.

   Write an equation, then solve for x.


T
$2x + 15$
$65°$
R
U
S

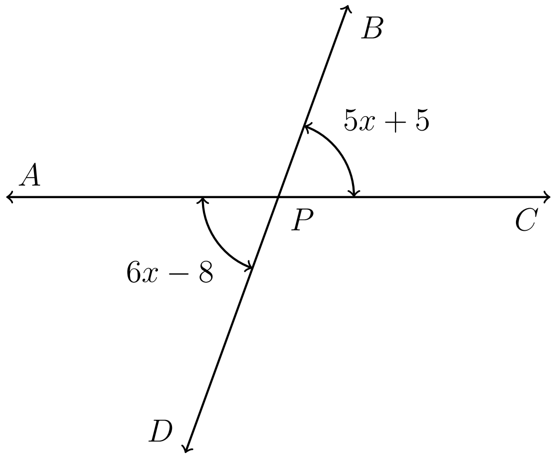
5. Given $m\angle ABD = 2x + 25$, $m\angle DBC = 4x$, and $m\angle ABC = 115°$, as shown.

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



6. Given vertical angles, $m\angle APD = 6x - 8$, $m\angle BPC = 5x + 5$, as shown.

   Find x. Check your solution for full credit.

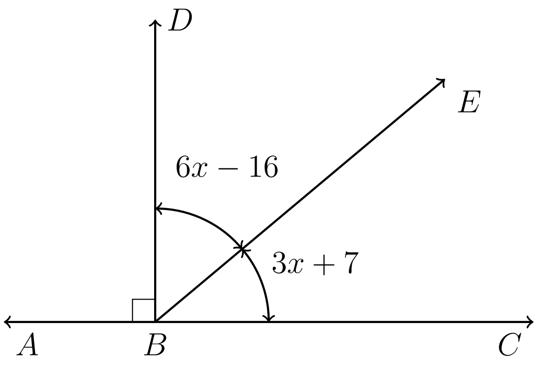

B
$5x + 5$
A
P
C
$6x - 8$
D

7. In the diagram shown, $\overrightarrow{BD} \perp \overleftrightarrow{ABC}$ with angle measures marked. Find x.

Show the check for full credit.

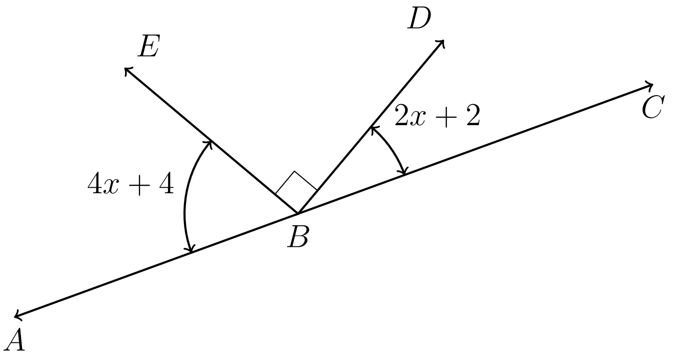
$m\angle DBE = 6x - 16^\circ$

$m\angle EBC = 3x + 7^\circ$



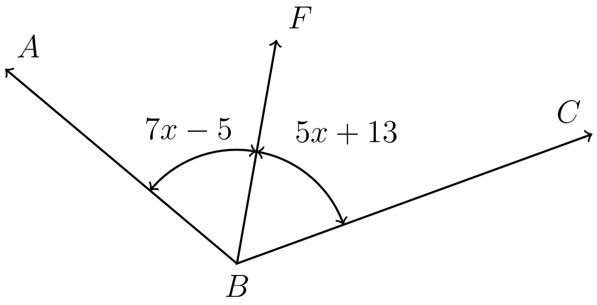
8. Spicy: Given $\overleftrightarrow{ABC}$, right angle $\angle DBE$, $m\angle ABE = 4x + 4$, and $m\angle CBD = 2x + 2$.

Find $m\angle CBD$.

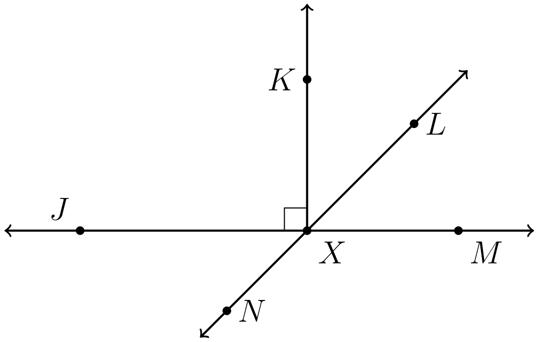

E
D
C
$2x+2$
$4x+4$
B
A

9. Spicy: Ray $\overrightarrow{BF}$ is the angle bisector of $\angle ABC$. Given that the angle measures are $m\angle ABF = 7x - 5$ and $m\angle CBF = 5x + 13$.

   Find $m\angle ABC$.



10. Spicy: Ray $\overrightarrow{XL}$ is the angle bisector of $\angle KXM$. Given $m\angle JXN = 4x - 23$.

Find $m\angle KXL$.