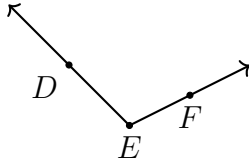


Name: _____

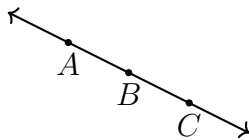
2.2 Homework: Angle addition

1. The size of an angle is its “measure,” which can be from 0° to 360°

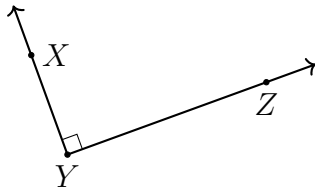
(a) Write down the name of this angle. Start with a less-than sign “ $<$ ”



(b) What is the degree measure made by these two opposite rays, \overrightarrow{BA} and \overrightarrow{BC} ?



(c) What is the degree measure of the angle, $m\angle XYZ$?



2. Type your answers. Use the less than key (“ $<$ ”) to represent an angle, followed by three letters.

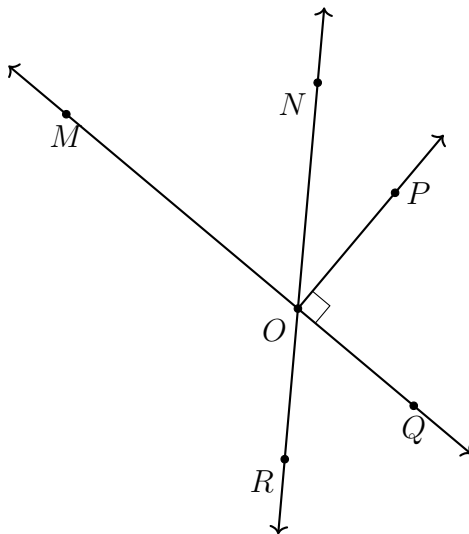
(a) Name the ray opposite to \overrightarrow{OR} : _____

(b) What is the measure of $\angle POM$? _____

(c) Name a right angle: _____

(d) Name the angle vertical to $\angle QOR$: _____

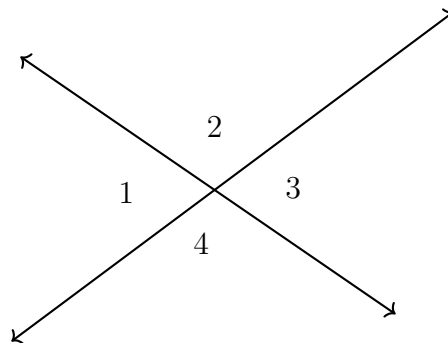
(e) Spicy: Are $\angle NOP$ and $\angle QOR$ complementary, supplementary, or neither?



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

Given $m\angle 1 = 70^\circ$.

(a) Find $m\angle 3$



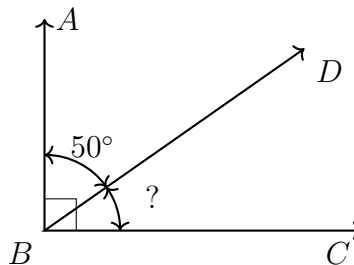
(b) Find $m\angle 4$

Angle addition situations

4. Apply the Angle Addition postulate. Write an equation to support your work.

Given $m\angle ABD = 50^\circ$, $m\angle ABC = 90^\circ$.

Find $m\angle DBC$.



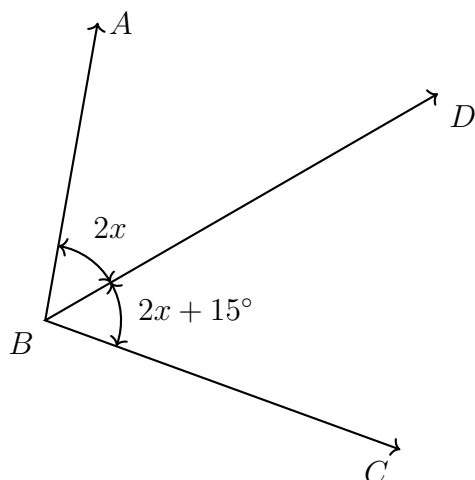
5. Given the angle measures and situation shown, write an equation and solve for x .

$$m\angle ABD = 2x$$

$$m\angle DBC = 2x + 15^\circ$$

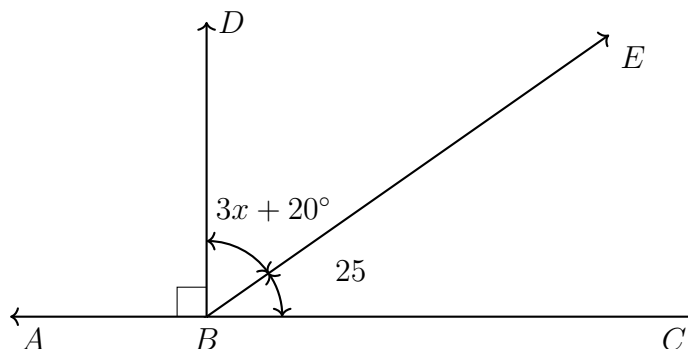
$$m\angle ABC = 115^\circ$$

Name:



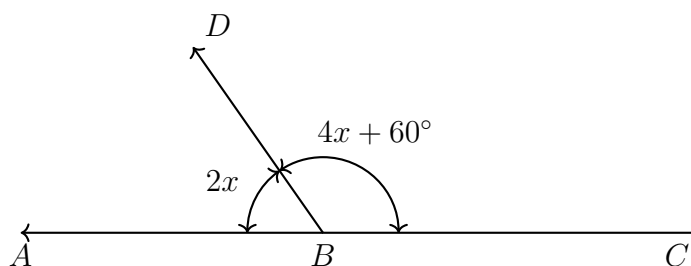
6. The ray \overrightarrow{BD} makes a 90° angle with the line \overleftrightarrow{ABC} , and $m\angle DBE = 3x + 20^\circ$, $m\angle EBC = 25^\circ$.

Find x , writing an equation to support your work.



7. Two supplementary angles have measures $m\angle ABD = 2x$ and $m\angle DBC = 4x + 60^\circ$.

Write an equation, then find x .

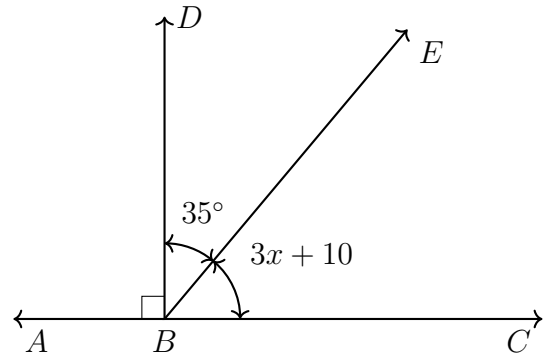


8. Given the perpendicular situation shown, $\overrightarrow{BD} \perp \overleftrightarrow{ABC}$ and angle measures given.

Find x .

$$m\angle DBE = 35^\circ$$

$$m\angle EBC = 3x + 10^\circ$$



9. A linear pair have measures $m\angle ABD = 7x + 16^\circ$ and $m\angle DBC = 5x + 20^\circ$.

Find $m\angle ABD$.

