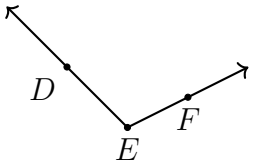
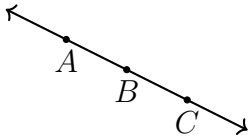
2.2 Homework: Angle addition

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

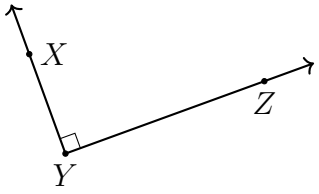
   (a) Write down the name of this angle. Start with an angle symbol ∠.



   (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. Given the diagram, answer each using proper notation, including the angle symbol ∠.

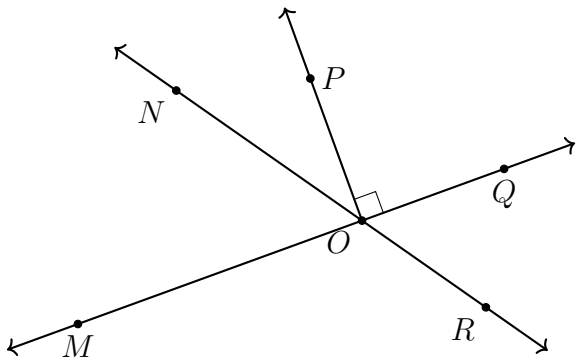
   (a) Name the ray opposite to $\overrightarrow{OR}$: _____

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

   (c) Name a right angle: _____

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

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

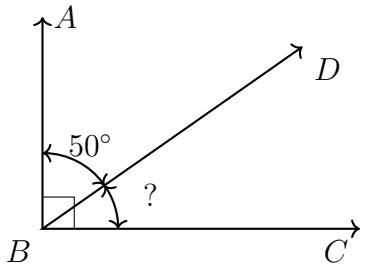


Angle addition situations

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

   Given $\text{m}\angle ABD = 50°$, $\text{m}\angle ABC = 90°$.

   Find $m\angle DBC$.

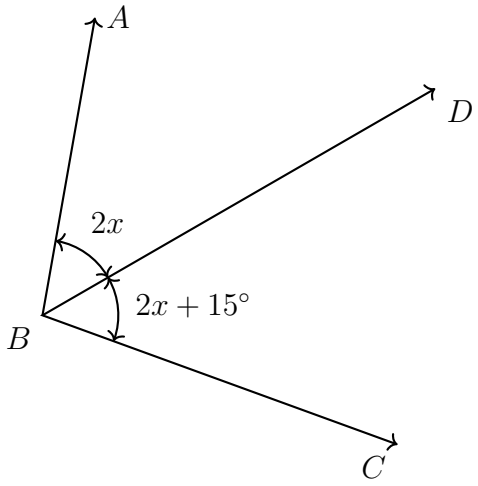


4. Given the angle measures and situation shown, write an equation and solve for x.

   $\text{m}\angle ABD = 2x$

   $\text{m}\angle DBC = 2x + 15°$

   $m\angle ABC = 115°$



5. The ray $\overrightarrow{BD}$ makes a 90° angle with the line $\overleftrightarrow{ABC}$. Given the complementary angles' measures are $\text{m}\angle DBE = 3x + 20°$ and $\text{m}\angle EBC = 25°$.

   Find x, writing an equation to support your work.