
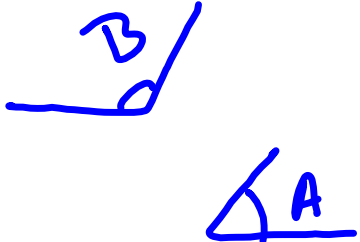


9-2 Complementary and Supplementary Angles

Objectives:



- Students will be able to define angle properties and use them to solve for missing information.

Vocabulary

Supplementary:  

$$A + B = 180^\circ$$

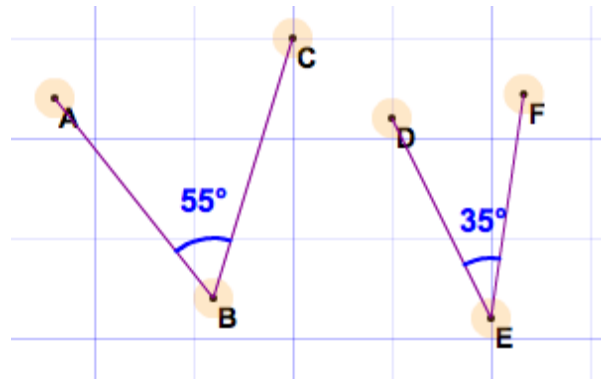
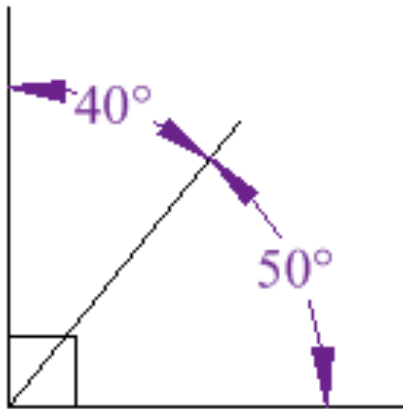
Complementary:

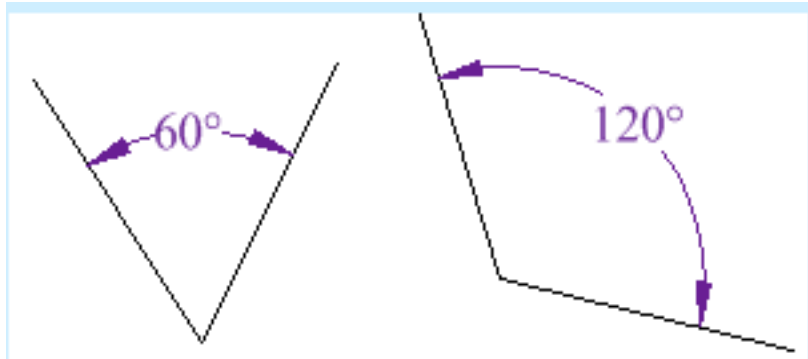
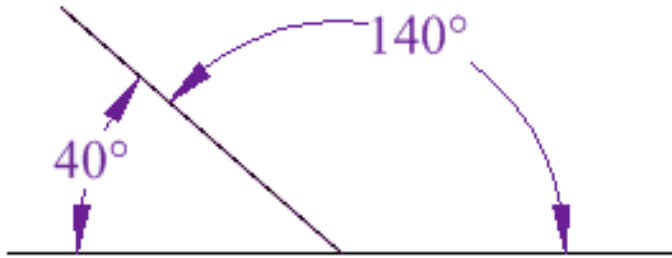
$$A + B = 90$$

Two Angles are **Complementary** when:

They add up to 90 degrees (a Right Angle).



Two Angles are **supplementary** when:
They add up to 180 degrees.



"C" of **C**omplementary stands for **"C**orner"

(a Right Angle) 

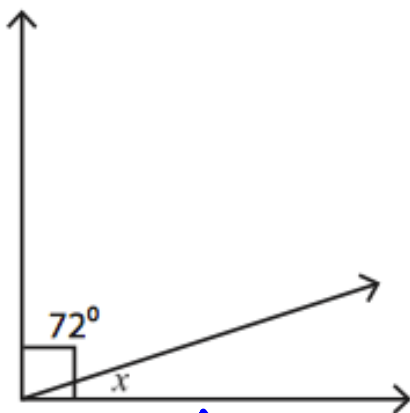
"S" of **S**upplementary stands for **"S**traight"

(180 degrees is a straight line) 

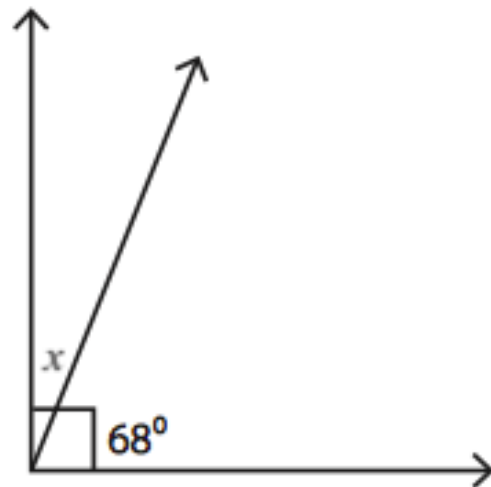
Angle	Complement
20°	70°
56°	34°
72°	18°
44°	46°
35°	55°
87°	3°

Angle	Supplement
125°	65°
37°	
111°	69°
152°	
95°	85°
64°	

Find the value of x:

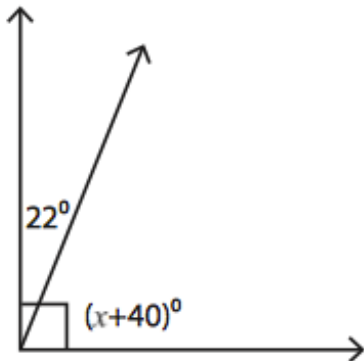


$$\begin{array}{r} x + 72^\circ = 90^\circ \\ - 72^\circ \quad - 72^\circ \\ \hline x = 18 \end{array}$$



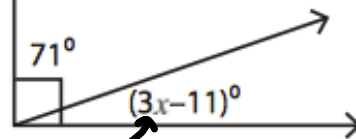
$$\begin{array}{r} x + 68^\circ = 90^\circ \\ - 68^\circ \quad + 68^\circ \\ \hline x = 22^\circ \end{array}$$

Find the value of x:

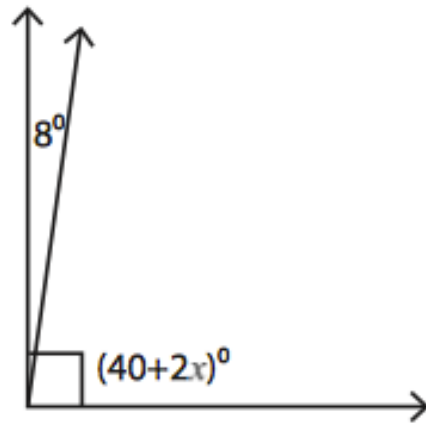
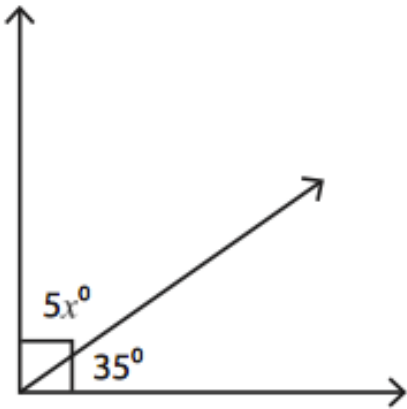


$$\begin{aligned} 3x - 11 + 71 &= 90 \\ 3x + 60 &= 90 \\ \underline{-60} \quad \underline{-60} & \\ 3x &= 30 \\ \underline{\quad 3} \quad \underline{\quad 3} & \\ x &= 10 \end{aligned}$$

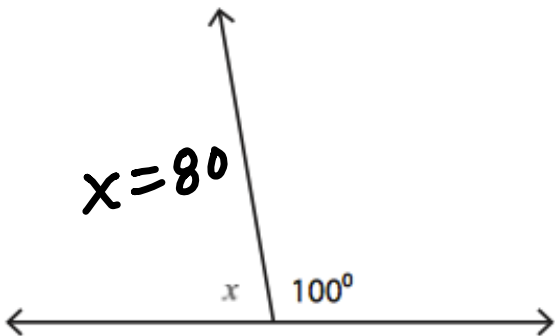
$$x = 10$$



Find the value of x :



Find the value of x:



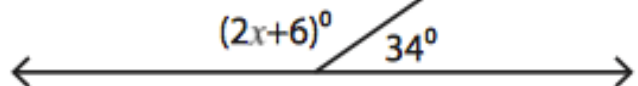
$$x = 80$$

$$6x + 60 = 180$$

$$2x + 6 + 34 = 180$$

$$2x + 40 = 180$$

$$\begin{array}{r} -40 \\ -40 \end{array}$$



$$\frac{2x = 140}{2} = 70$$

Find the value of x :

