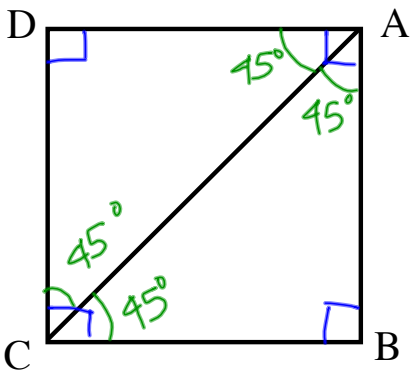
7th Grade
Lesson 40

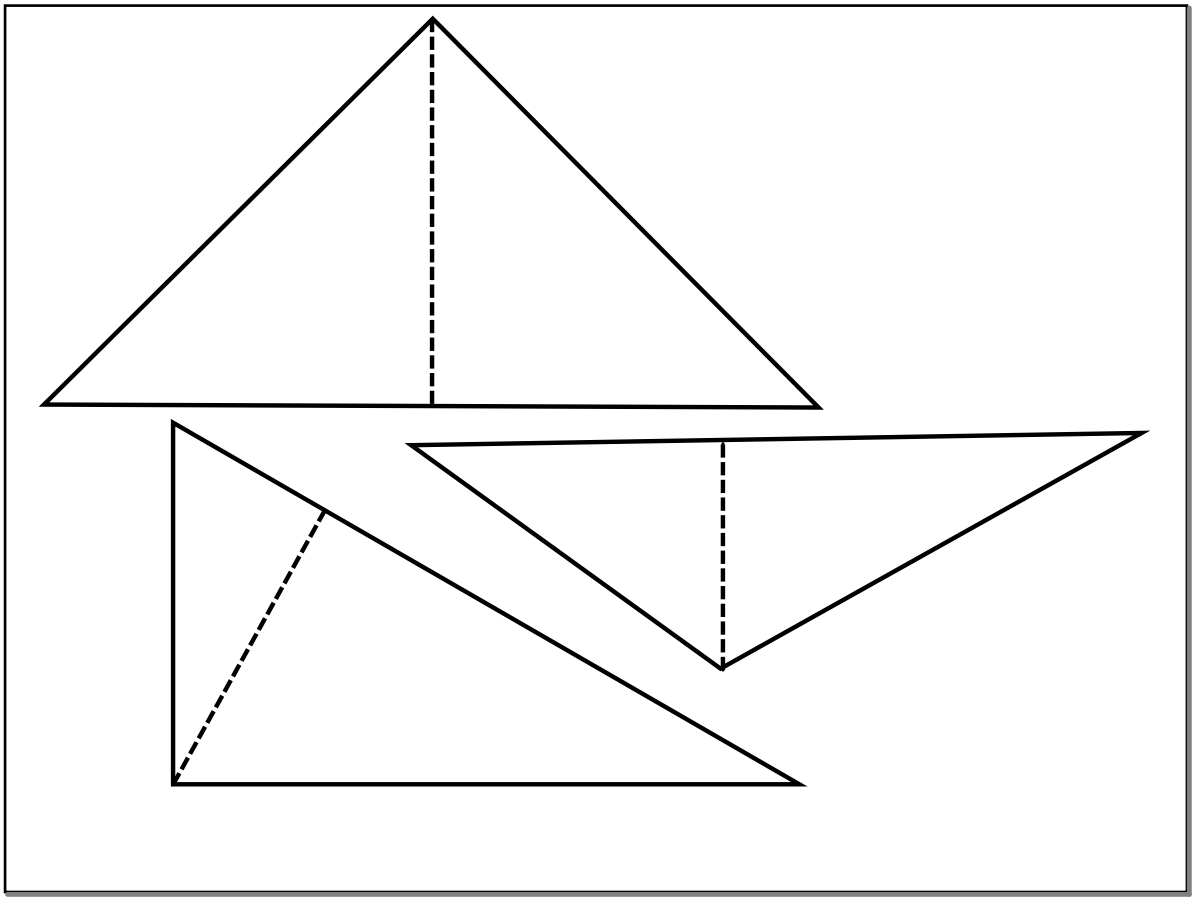
- I can verify that the sum of the measures of the three angles in a triangle is 180°.
- I can find the missing angle measure of a triangle.
- I can identify special angle relationships.
- I can use angle relationships to find missing angle measures in figures.

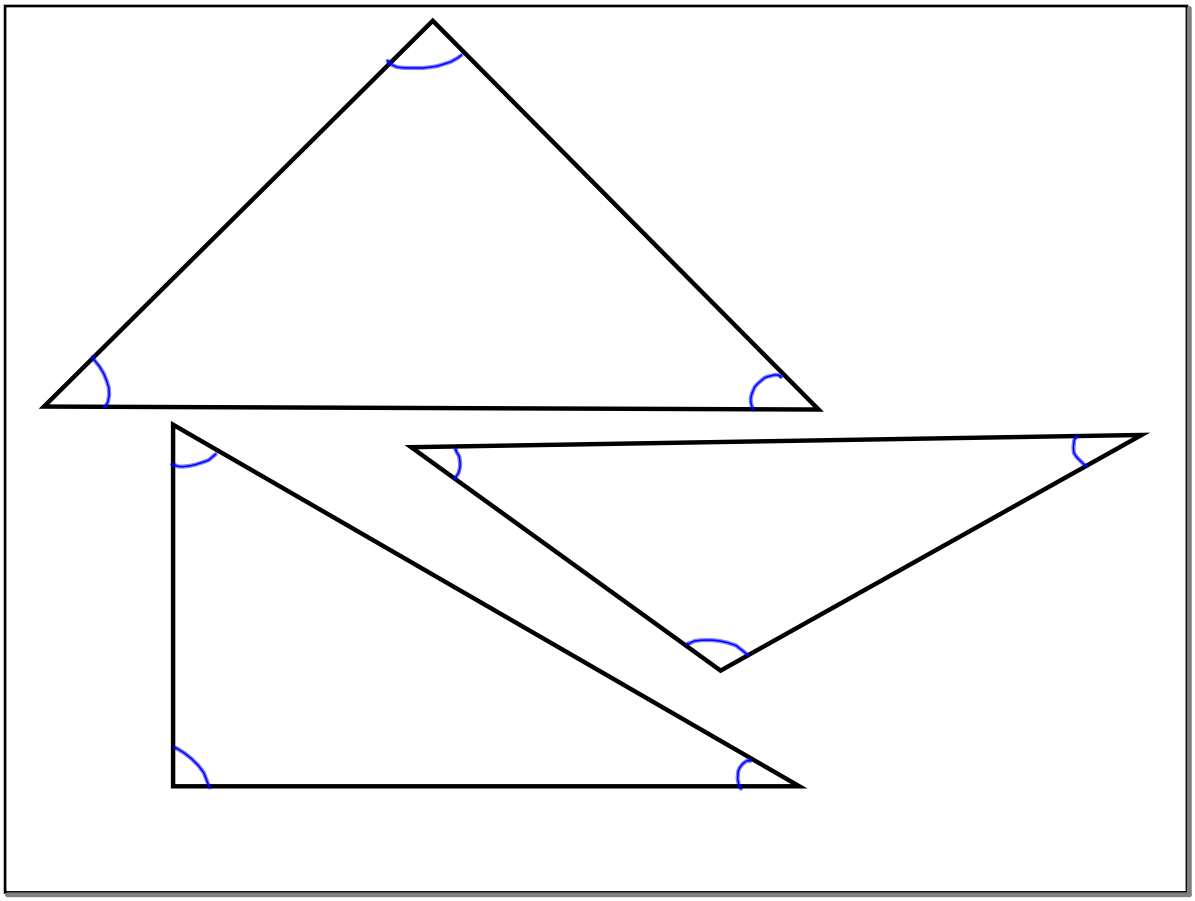


$\overline{AC}$ divides $\angle C$ in half and $\angle A$ in half

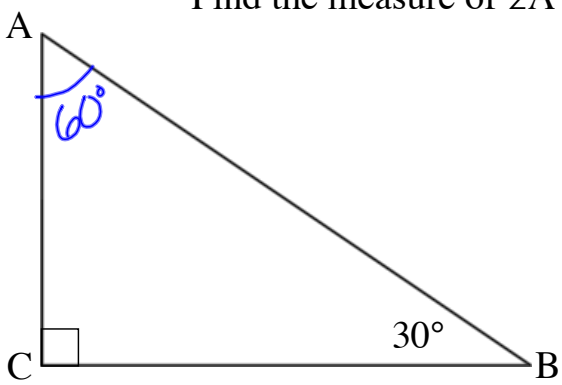
$\triangle ABC$
$m\angle A = 45°$
$m\angle C = 45°$
$m\angle B = 90°$
$180°$

November 16, 2012

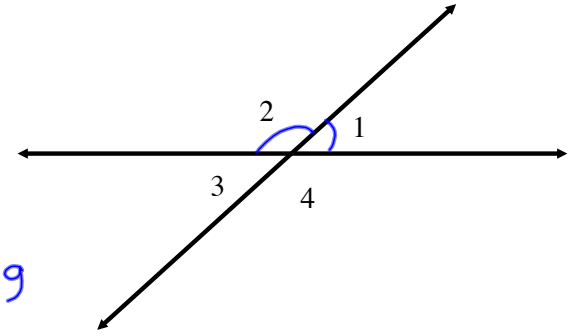




Find the measure of $\angle A$ in ΔABC



$m\angle A = 60°$

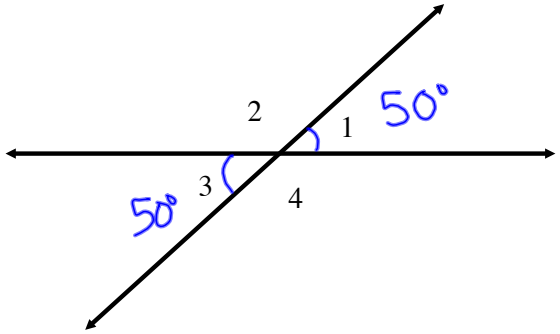


Intersecting Lines

Adjacent angles $\angle 1$ and $\angle 2$, $\angle 3$ and $\angle 4$, $\angle 3$ and $\angle 2$, $\angle 4$ and $\angle 1$

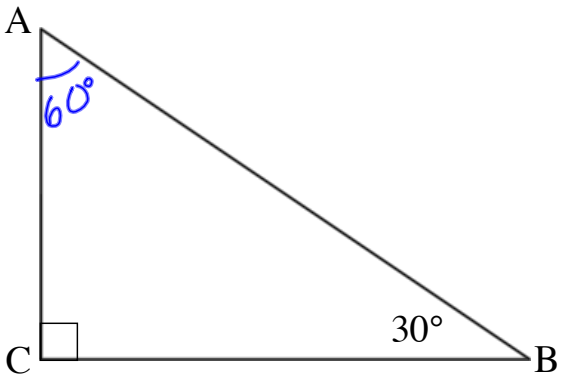
- > share a common side
- > together they form a straight angle
- > the sum of their measures is 180°

Supplementary angles...two angles whose sum is 180°



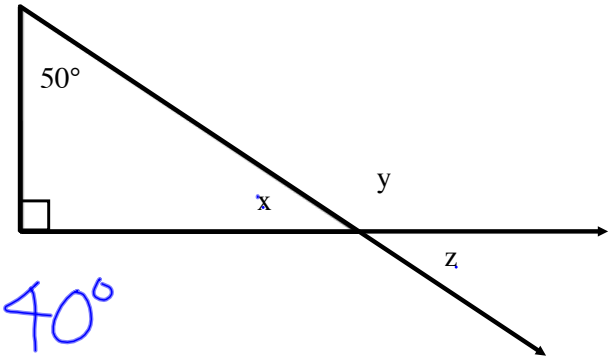
Vertical angles

- pair of nonadjacent angles
- formed by a pair of intersecting lines
- have the same measure



∠A and ∠B

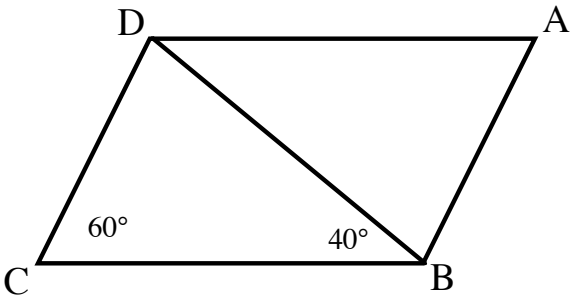
Complementary angles...two angles whose sum is 90°

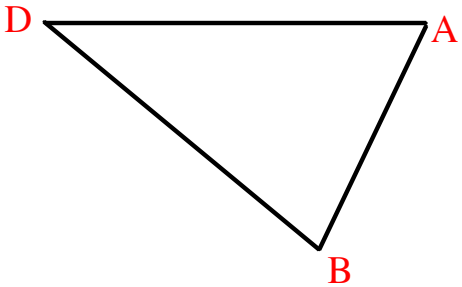


$m\angle x = 40°$

$m\angle y = 140°$

$m\angle z = 40$





Assignment:

Problem Set 40 due Thursday;
Test #7 on Wednesday