

Do Now:

Solve each equation:

1. $2(50 + 4a) = 130$

2. $\frac{1}{3}m - 110 = 20$

3. $3(60 + y) - 4y = 135$

4. $\frac{2}{3}(x - 9) = 6$

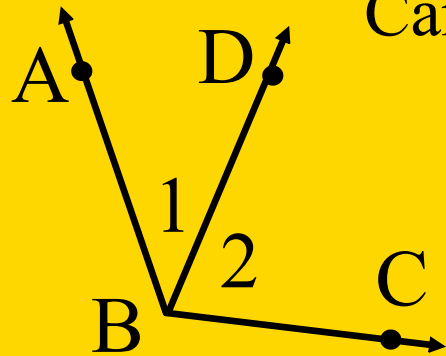
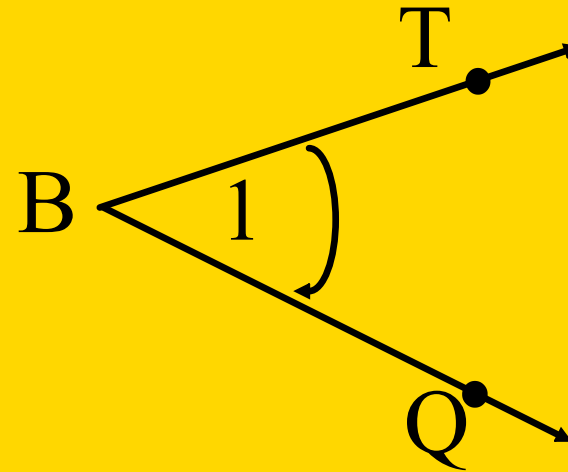
Geometry

Ch. 1 Handout 1.6

Measuring Angles

An angle ($\angle$) is formed by two rays with the same endpoints.

Name the angle at the right.



Can you name the $\angle ABC$ at the left as $\angle B$? $\angle 1$? $\angle 2$?

Acute Angle has

Right Angle has

Pull

Pull

Obtuse Angle has

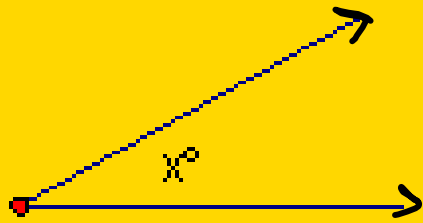
Straight Angle has

Pull

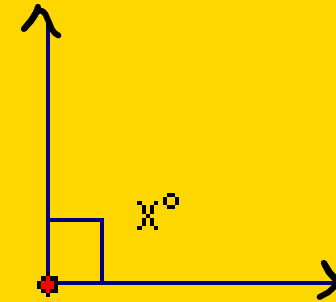
Pull

Congruent ($\cong$) Angle has

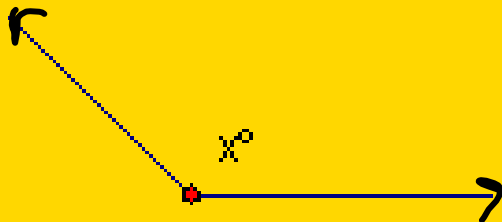
Pull



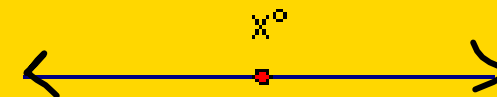
_____ angle
 $0 < x < \underline{\hspace{1cm}}$



_____ angle
 $x = \underline{\hspace{1cm}}$

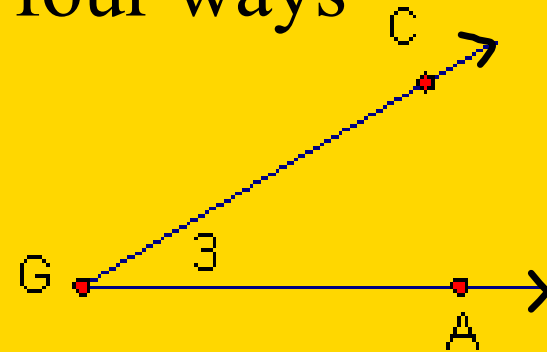


_____ angle
 $\underline{\hspace{1cm}} < x < \underline{\hspace{1cm}}$

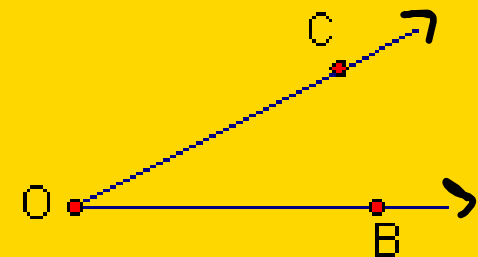
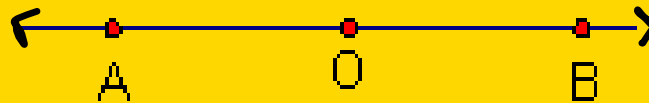
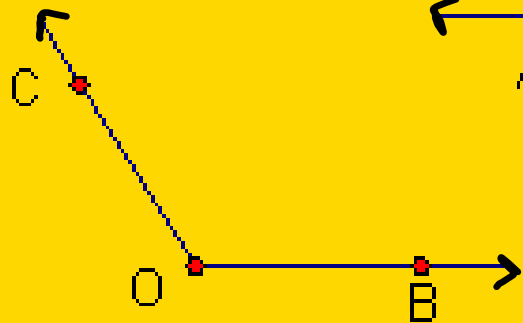


_____ angle
 $x = \underline{\hspace{1cm}}$

1. Name the angle at the right in four ways

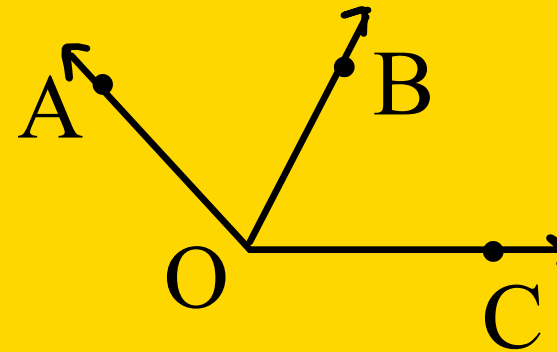


2. Classify each as acute, right, obtuse, and straight.

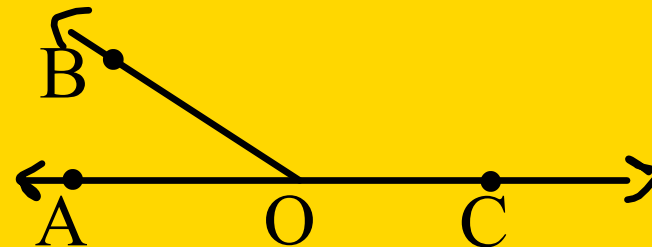


Angle Addition Postulate

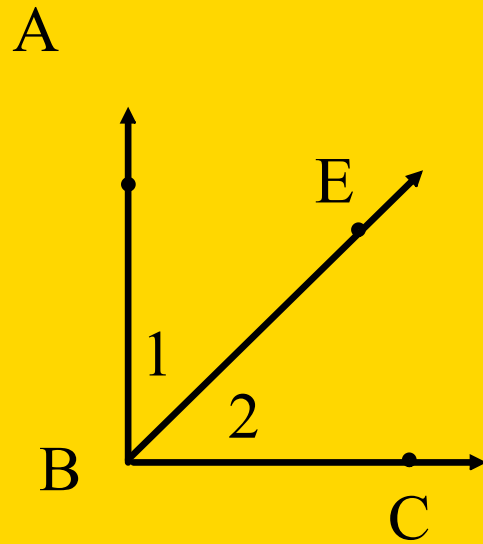
If point B is in the interior of $\angle AOC$, then
 $m\angle \underline{\hspace{2cm}} + m\angle \underline{\hspace{2cm}} = m\angle AOC$.



If $\angle AOC$ is a straight angle, then $m\angle AOB + m\angle BOC = \underline{\hspace{2cm}}$

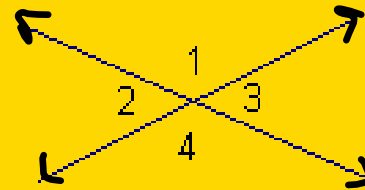


3. Suppose that $m\angle 1 = 42$ and $m\angle ABC = 88$.
Find $m\angle 2$. (Use angle addition postulate)

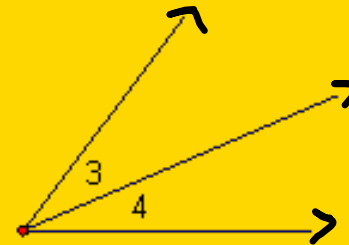


Angle Pairs

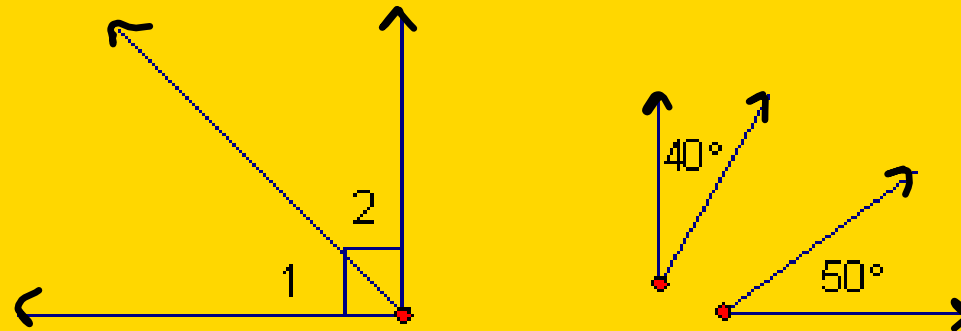
Vertical angles- two angles whose sides are opposite rays (look for intersecting lines)



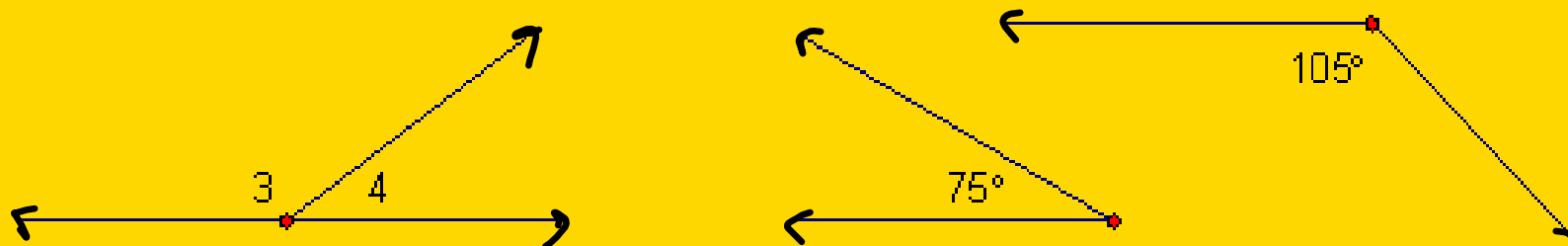
Adjacent angles - two coplanar angles with a common side, a common vertex, and no common interior points



Complementary angles - two angles whose measures have sum 90.
-- each angle is called the *complement* of the other



Supplementary angles - two angles whose measure have sum 180
-- each angle is called the *supplement* of the other.



4. In the diagram identify pairs of numbered angles that are related as follows:

a) complementary:

$\angle 3$ and $\angle 4$

b) supplementary:

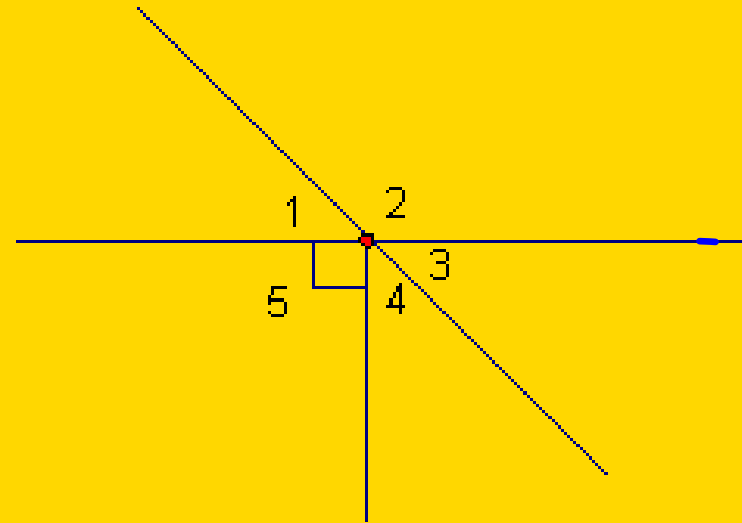
$\angle 1$ and $\angle 2$

c) vertical angles:

$\angle 1$ and $\angle 3$

d) adjacent angles:

$\angle 1$ and $\angle 5$



Making conclusions from a diagram (pg 39)

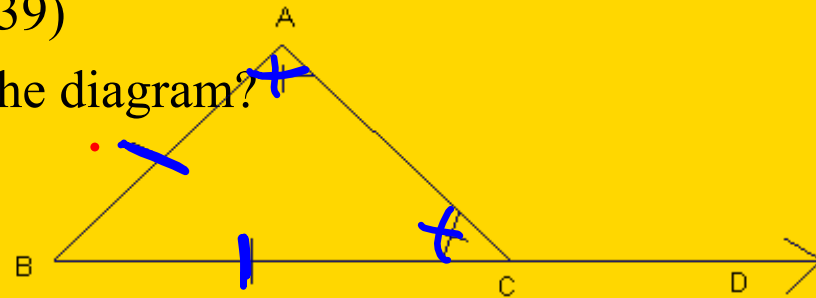
5. Can you make each conclusion from the diagram?

a) $\angle A \cong \angle C$
yes

b) $\angle B$ and $\angle ACD$ are supplementary
No

c) $m\angle BCA + m\angle DCA = 180$
yes.

d) $\overline{AB} \cong \overline{BC}$ yes



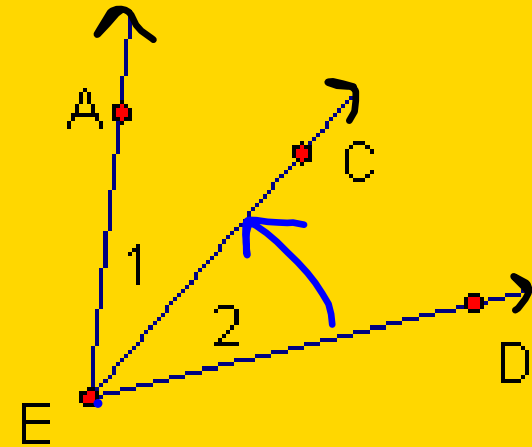
6. Use the diagram at the right.

a) Name $\angle CED$ two other ways.

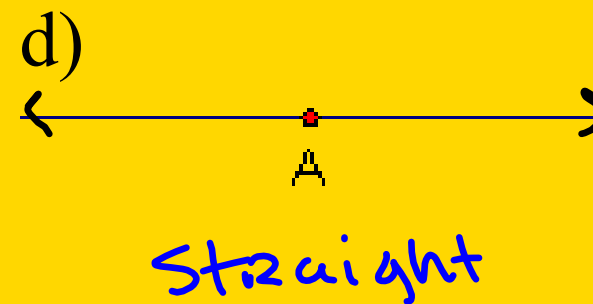
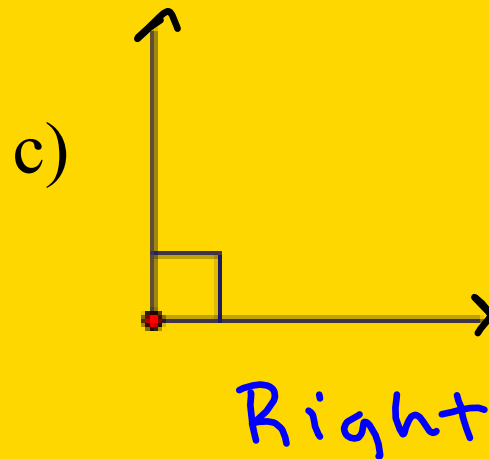
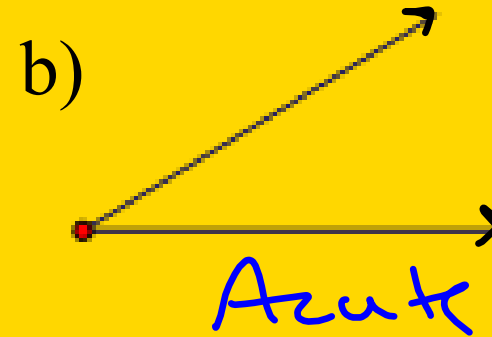
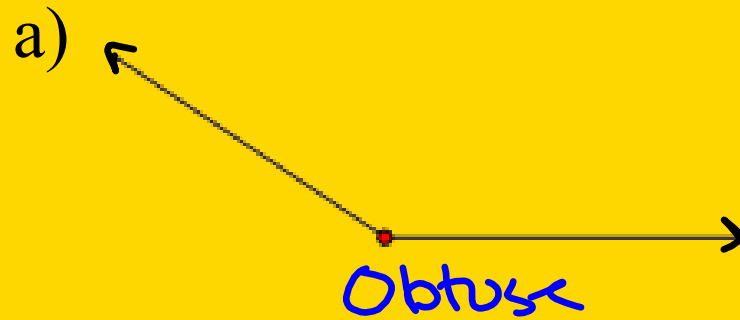
$\angle 2$, $\angle DEC$

b) Would it be correct to name any of the angles $\angle E$? Explain.

No, don't know which angle
you are referring to when use
 $\angle E$.



7. Classify each angle as acute, right, obtuse, or straight:

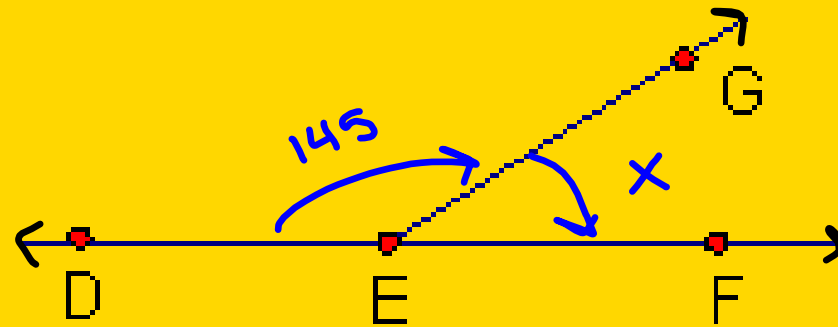


8. If $m\angle DEG = 145$, find $m\angle GEF$.

$$\begin{array}{r} 145 + x = 180 \\ -145 \quad \quad -145 \\ \hline \end{array}$$

$$x = 35$$

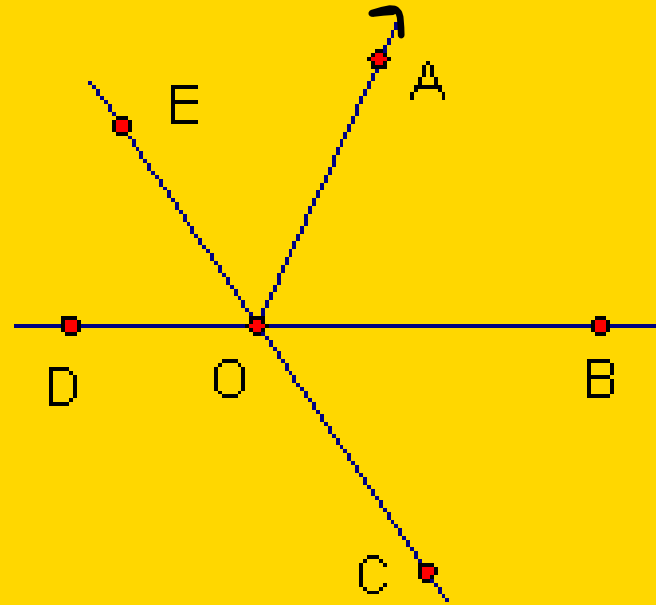
$$m\angle GEF = 35^\circ$$



9. Name an angle or angles in the diagram supplementary to each of the follow

a) $\angle DOA$
 $\angle AOB$

b) $\angle EOB$
 $\angle EOD$
 $\angle BOC$



10. Can you make each conclusion from the information in the diagram? Explain.

a) $\angle 1 \cong \angle 3$

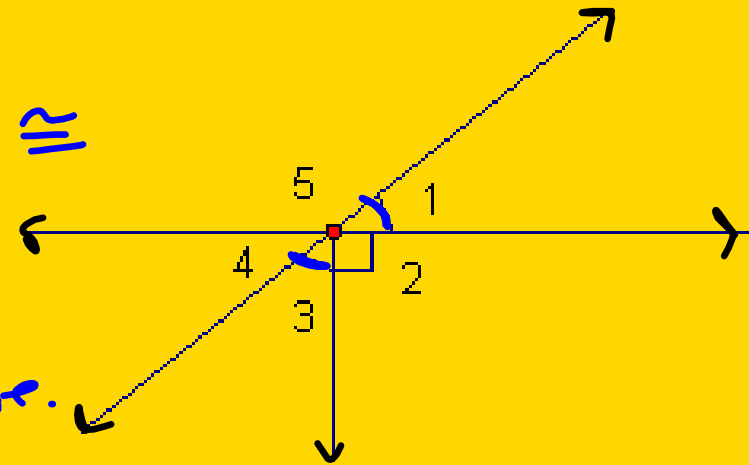
yes, markings show $\cong$

b) $\angle 4$ and $\angle 5$ are supplementary

yes, two $\angle$'s that add up to 180 are supple.

c) $m\angle 1 + m\angle 5 = 180$

yes



11. Give the complementary and supplementary measure to each angle.

a) $m\angle A = 30$

$$\begin{array}{r} 90 \\ - 30 \\ \hline \end{array} \quad \begin{array}{r} 180 \\ - 30 \\ \hline \end{array}$$

C: 60°
S: 150°

c) $m\angle A = 95$

$$\begin{array}{r} 180 \\ - 95 \\ \hline \end{array}$$

C: None
S: 85°

b) $m\angle A = 42$

$$\begin{array}{r} 90 \\ - 42 \\ \hline \end{array} \quad \begin{array}{r} 180 \\ - 42 \\ \hline \end{array}$$

C: 48°
S: 138°

d) $m\angle 150$

$$\begin{array}{r} 180 \\ - 150 \\ \hline \end{array}$$

C: none
S: 30°

Assignment



Day 2: Pgs 40-42 15-34,46,47,50-54

