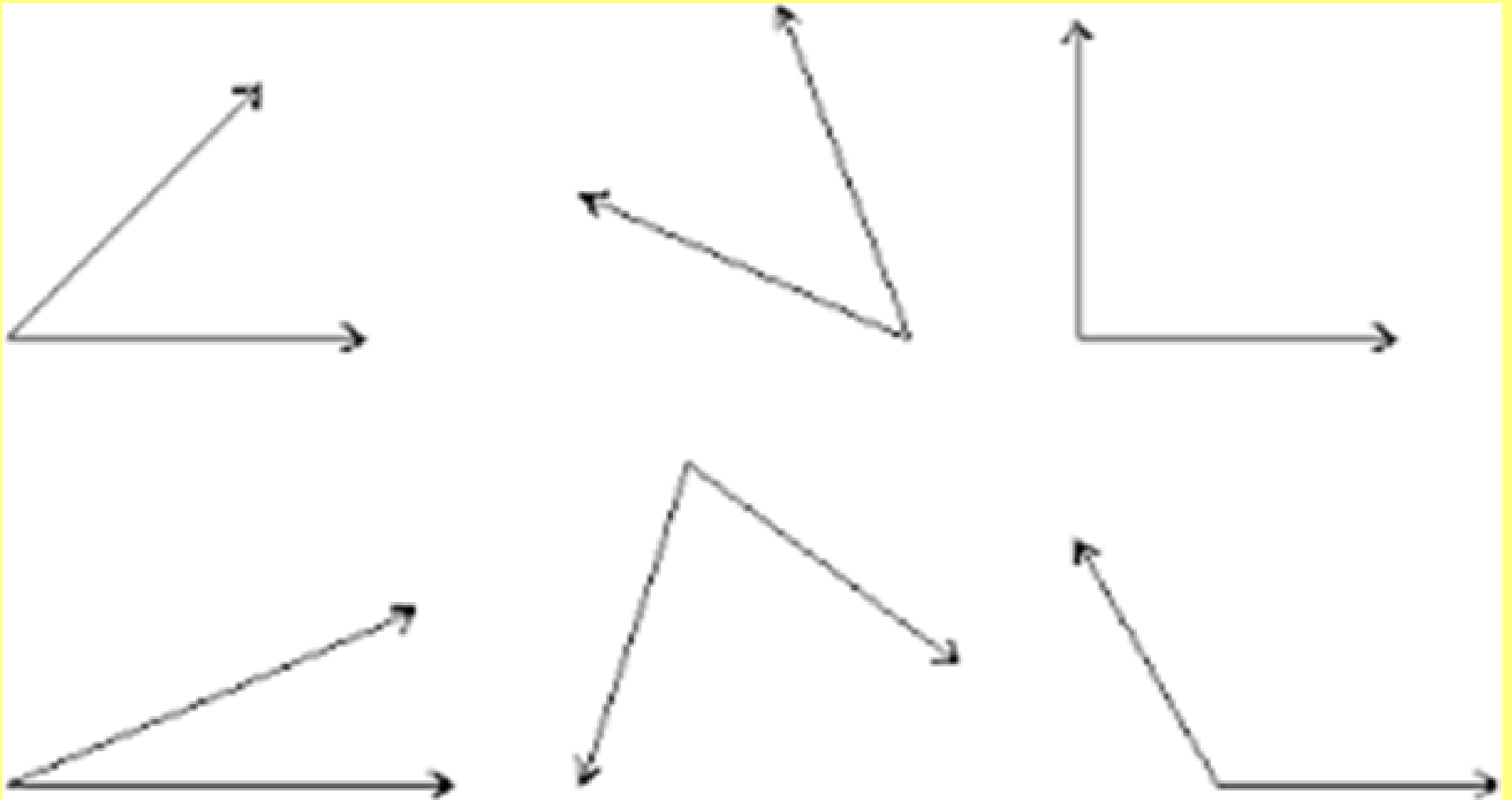


Classification and Naming of Angles



Vocabulary

1) Vertex of an angle - symbol -



It is the common endpoint of the rays forming an angle.

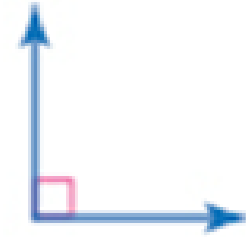
2) Angle - symbol - \angle

Two rays with a common endpoint form an angle. The rays and vertex are used to name the angle.

$m\angle d$

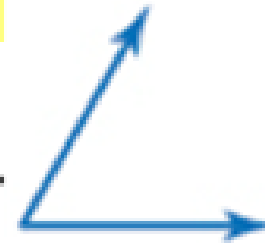
This is read: the measure of angle d.

3) Right angle - symbol - _____



An angle that measures exactly 90°

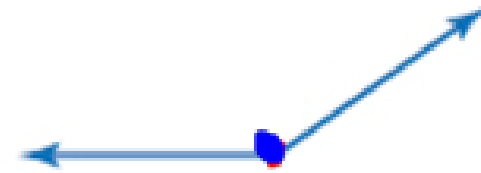
4) Acute angle - symbol - _____



An angle with a measure greater than 0°
and less than 90°



5) Obtuse angle - symbol -



An angle that measures greater than 90° and less than 180°

6) Straight angle - symbol -



An angle that measures exactly 180°

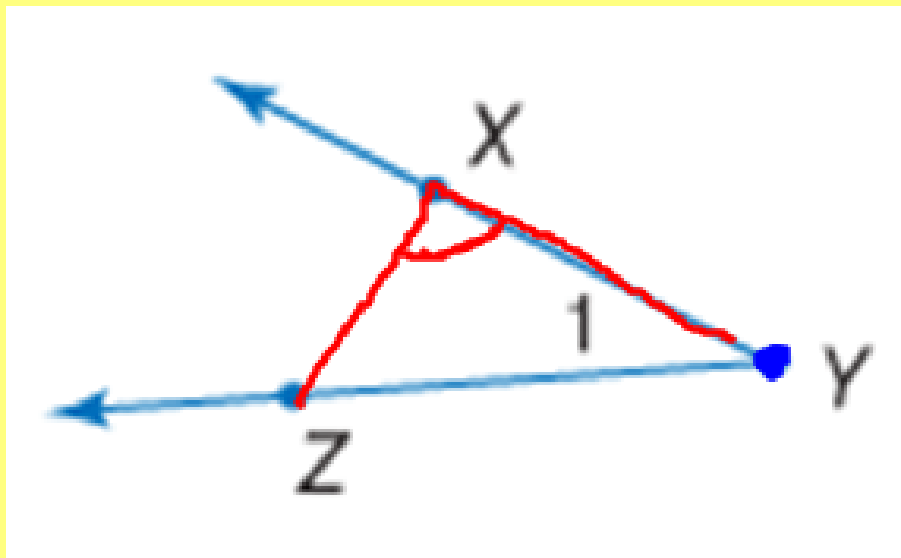


7)

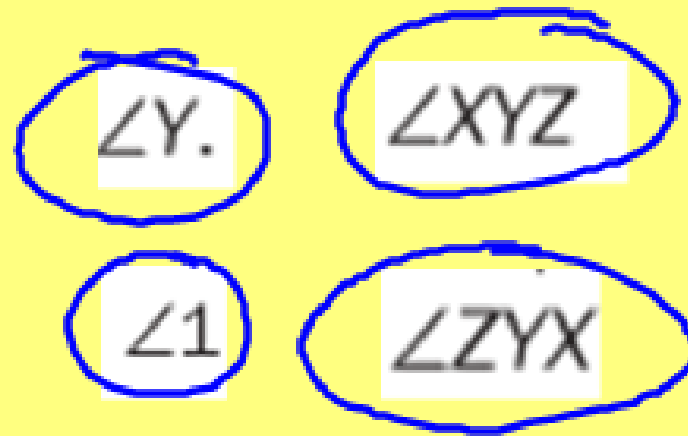
Congruent - symbol - \cong

Having the same measure

When looking at an angle, it is important to identify which angle we are referring to. This is called naming the angle. In the angle below, we can name it four ways. We can also classify every angle as acute, right, obtuse, or straight.

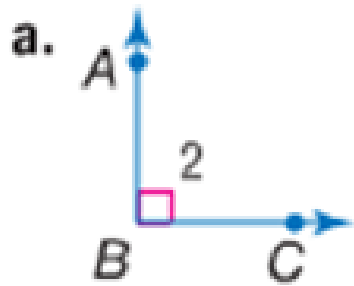


$\angle ZXY$



The measure of this angle is less than 90° , so it is classified as an acute angle.

1) Name each angle in four ways. Then classify each angle as acute, right, obtuse, or straight.



$\angle ABC$

$\angle CBA$

$\angle B$

$\angle 2$

right \angle

$\angle RST$

$\angle TSR$

$\angle S$

$\angle 3$

obtuse \angle

$\angle LMN$

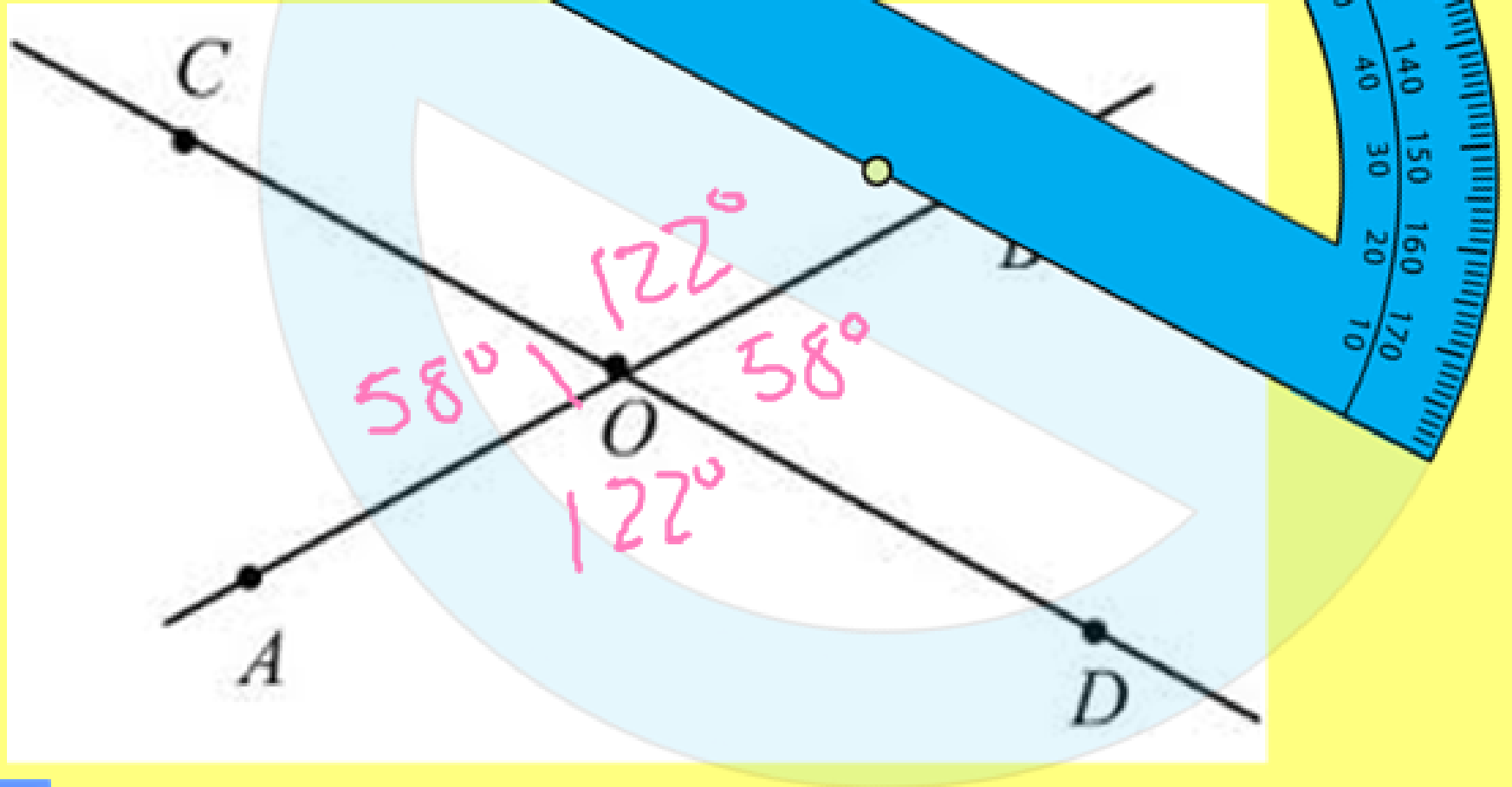
$\angle NML$

$\angle 4$

$\angle M$

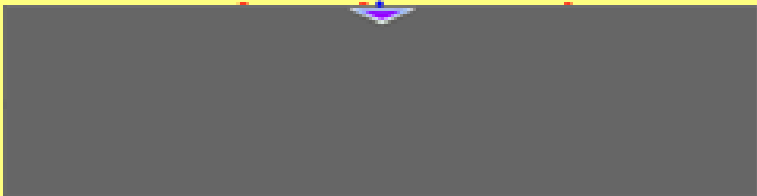
straight \angle

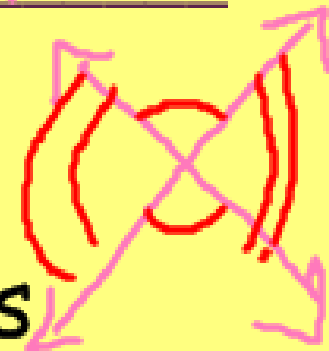
We can measure angles using a protractor



2) $m\angle COA$ 58° and $m\angle BOD$ 58°
 $m\angle AOD$ 122° and $m\angle COB$ 122°

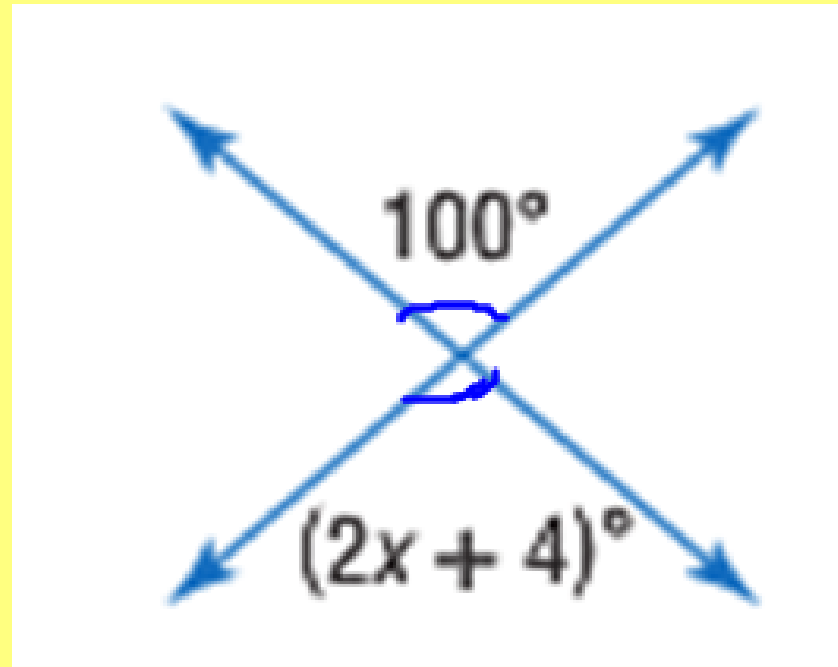
What do you notice about the measures of each pair of angles? \cong , the same measure

Opposite angles formed by the intersection of two lines are called 



Their measures are always congruent.

3) Find the value of x in the figure.



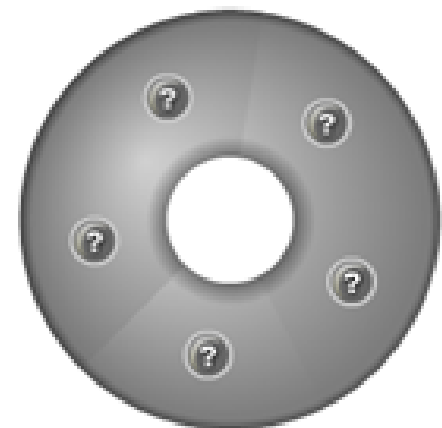
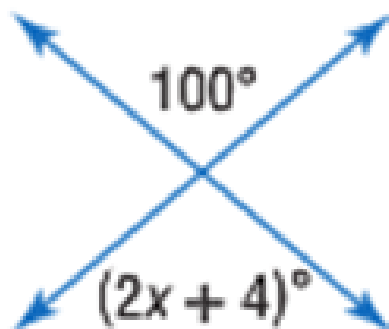
$$\begin{array}{r} 2x + 4 = 100 \\ -4 \quad -4 \\ \hline 2x = 96 \\ \frac{2x}{2} = \frac{96}{2} \quad x = 48 \end{array}$$

3. What is the value of x in the figure?

A $x = 100$

B $x = 48$

C $x = 52$



4. $\angle COA$ and $\angle AOD$ are called adjacent angles. Adjacent angles are angles that have the same vertex, share a common side and don't overlap. Name three other pairs of adjacent angles from the picture below.

