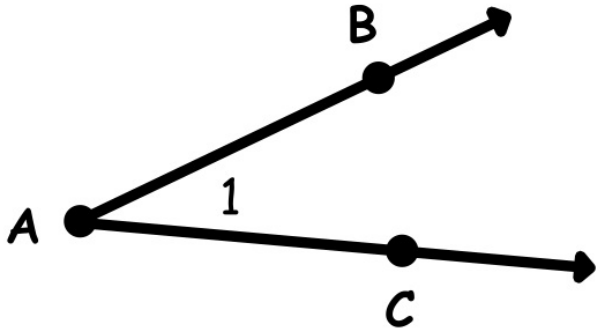
Measuring Angles

Lesson Objective:

- Classify different types of angles
- Describe different relationships of angle pairs
- Find missing values of different angles

1-6 Measuring Angles

Angle (∠): formed by 2 rays with the same endpoint



side side

vertex

Name 4 different ways to name this angle:

Matching - Click and Drag

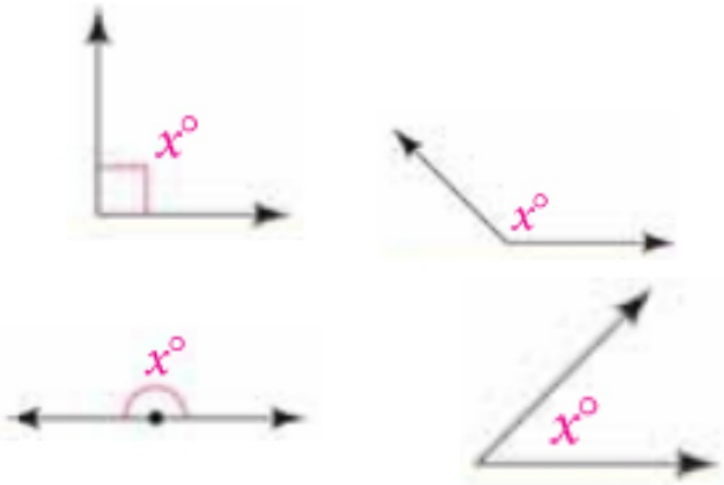
Classifying Angles:

Acute **Right** **Obtuse** **Straight**

exactly 180^0

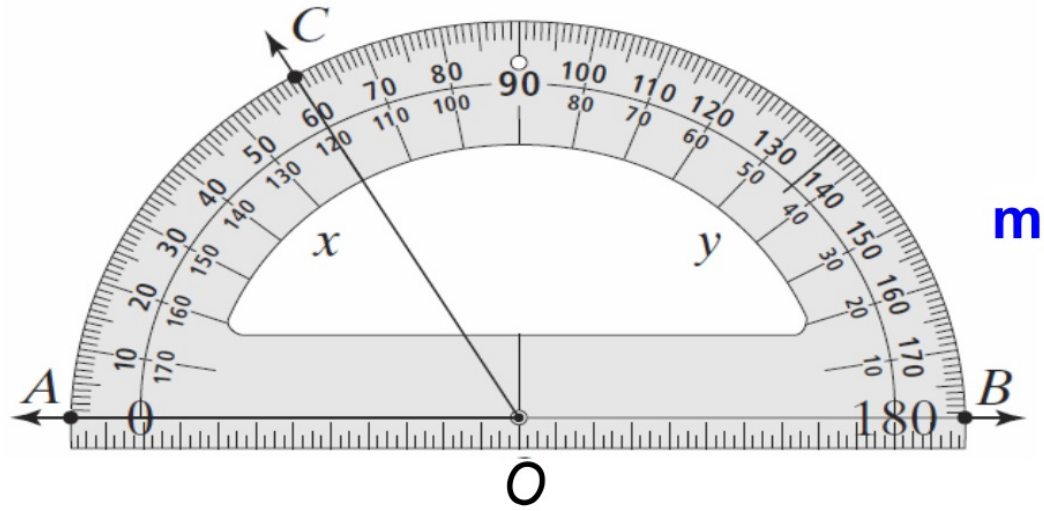
exactly 90^0 less than 90^0

between 90^0 and 180^0

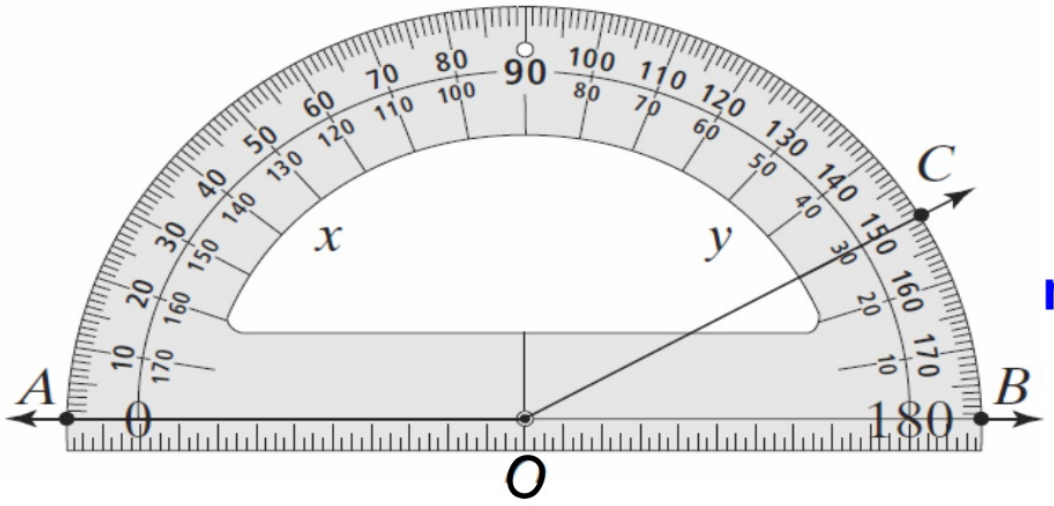


Measuring and Classifying Angles

Find the measure of <AOC then classify it as acute, right, obtuse or straight.

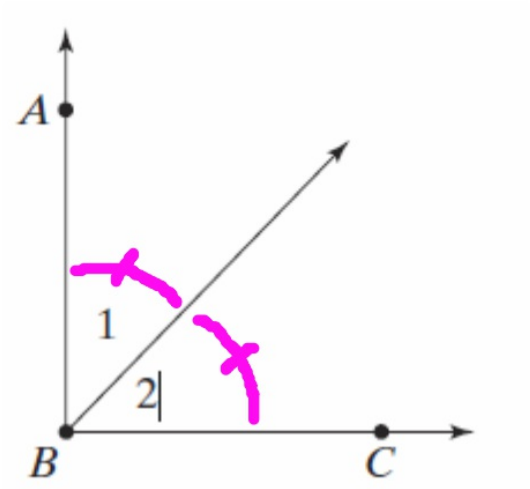


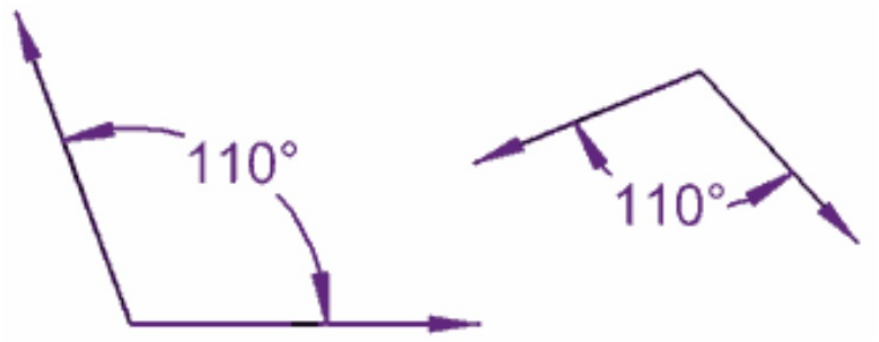
m<AOC =



m<AOC =

Congruent Angles : Angles with the same measure





These angles are congruent.

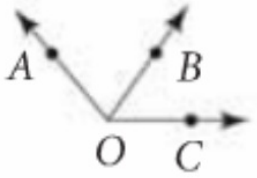
They don't have to point in the same direction.

They don't have to be on similar sized lines.

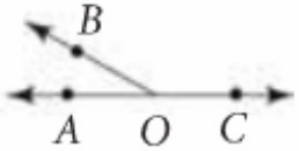
Just the same angle.

Postulate 1-8 **Angle Addition Postulate**

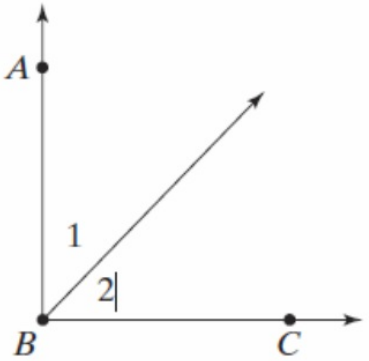
If point B is in the interior of $\angle AOC$, then $m\angle AOB + m\angle BOC = m\angle AOC$.



If $\angle AOC$ is a straight angle, then $m\angle AOB + m\angle BOC = 180$.

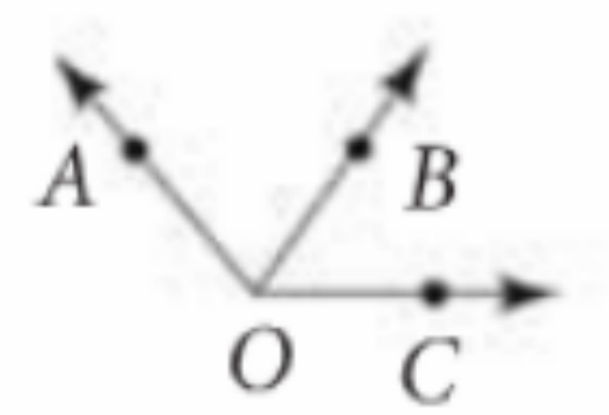


Suppose m<1 = 42 and m<ABC = 88. Find m<2.

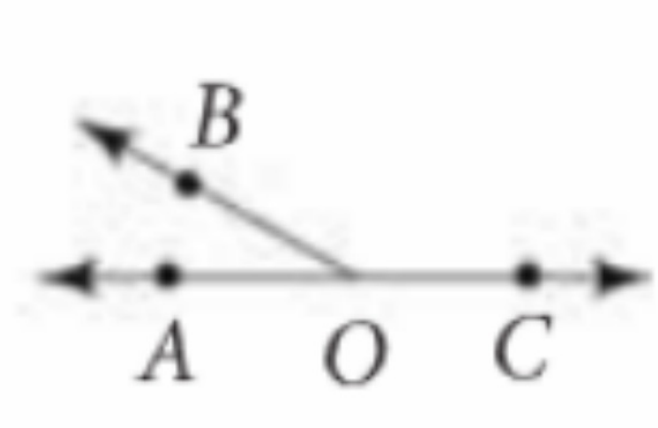


Suppose m<1 = 28 and m<2 = 62. How could you find m<2?

1. In the diagram below, m<AOB = 2x - 1, m<BOC = 4x + 5, and the m<AOC = 40. Find the value of x, <AOB, and <BOC.



2. In the diagram below m<AOB = 5w and the m<BOC = 7w - 3. Find the value of x, <AOB, and <BOC.



Angle Pairs

vertical angles

adjacent angles

complementary angles

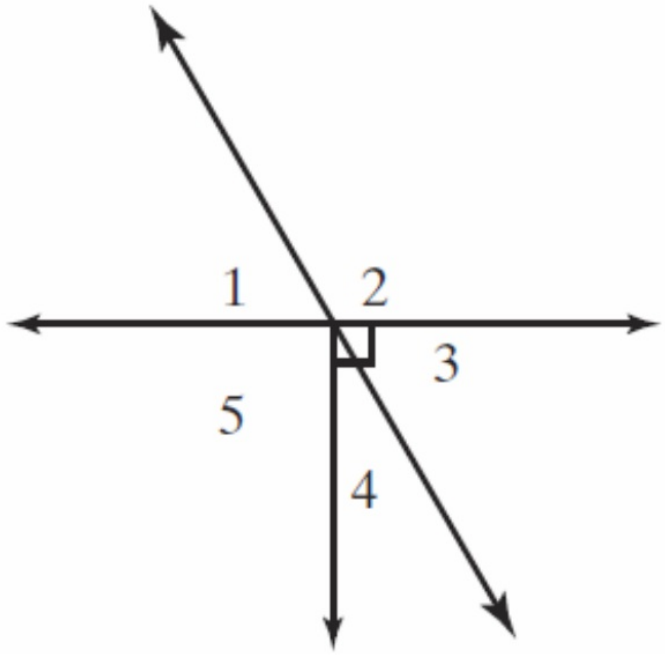
supplementary angles

Identifying Angle Pairs In the diagram identify pairs of numbered angles that are related as follows:

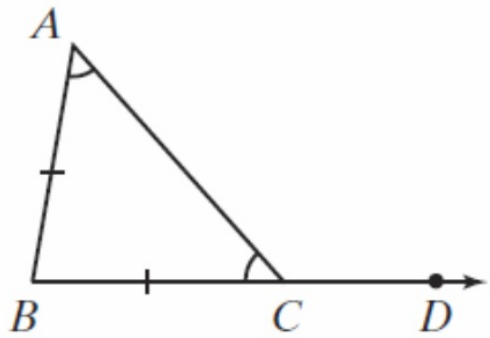
a. complementary

b. supplementary

c. vertical angles



Making Conclusions From a Diagram Can you make each conclusion from the diagram?

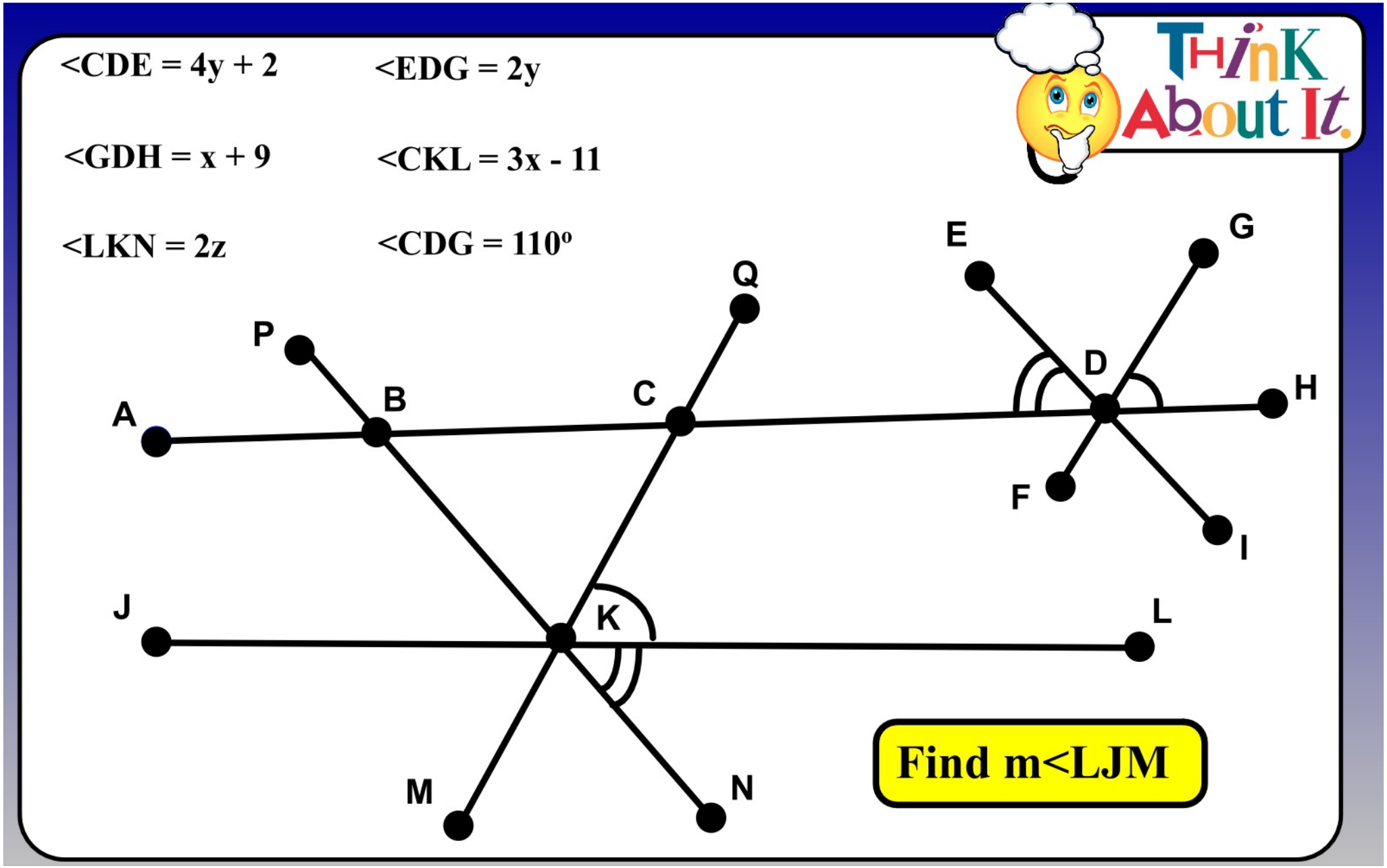


a. $\angle A \cong \angle C$

b. $\angle B$ and $\angle ACD$ are supplementary

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

d. $\overline{AB} \cong \overline{BC}$


<CDE = 4y + 2
<EDG = 2y
<GDH = x + 9
<CKL = 3x - 11
<LKN = 2z
<CDG = 110º
THiNK About It.
E
G
Q
P
D
H
A
B
C
F
I
J
K
L
M
N
Find m<LJM

Measuring Angles

Lesson Objective:
I can find, name, identify and classify the measures of angles.

Assignment:

Pages 40-41: 1-33 odds, 43,47