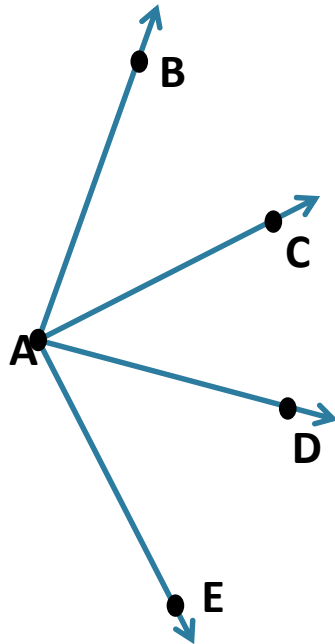# Warm Up

How many angles are in this picture?

How would I **name** each one?

Check Homework

Remember: 4 Types of angles

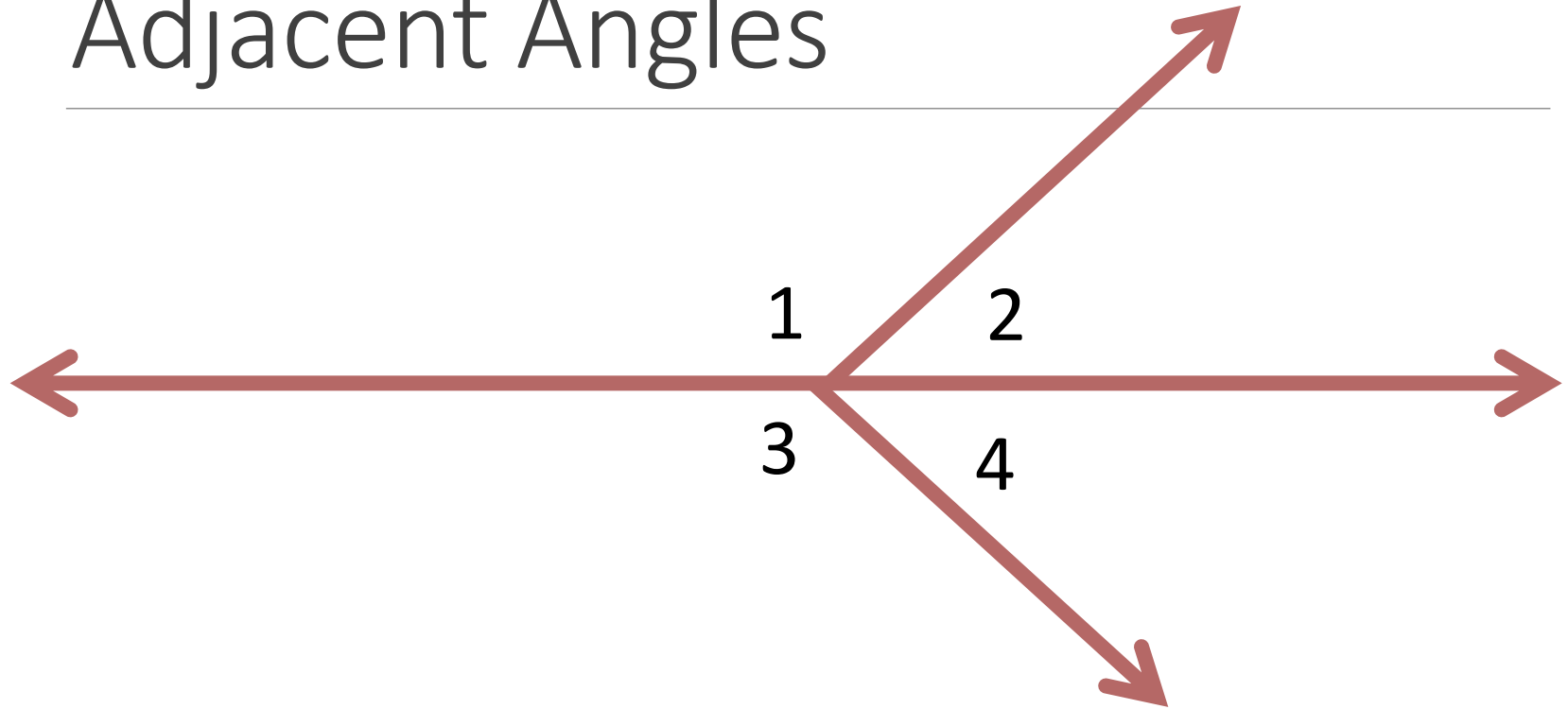**<u>Acute</u>**: between 0 and 90 degrees

<u>Right:</u> exactly 90 degrees

<u>Obtuse:</u> between 90 and 180 degrees

<u>Straight:</u> exactly 180 degrees

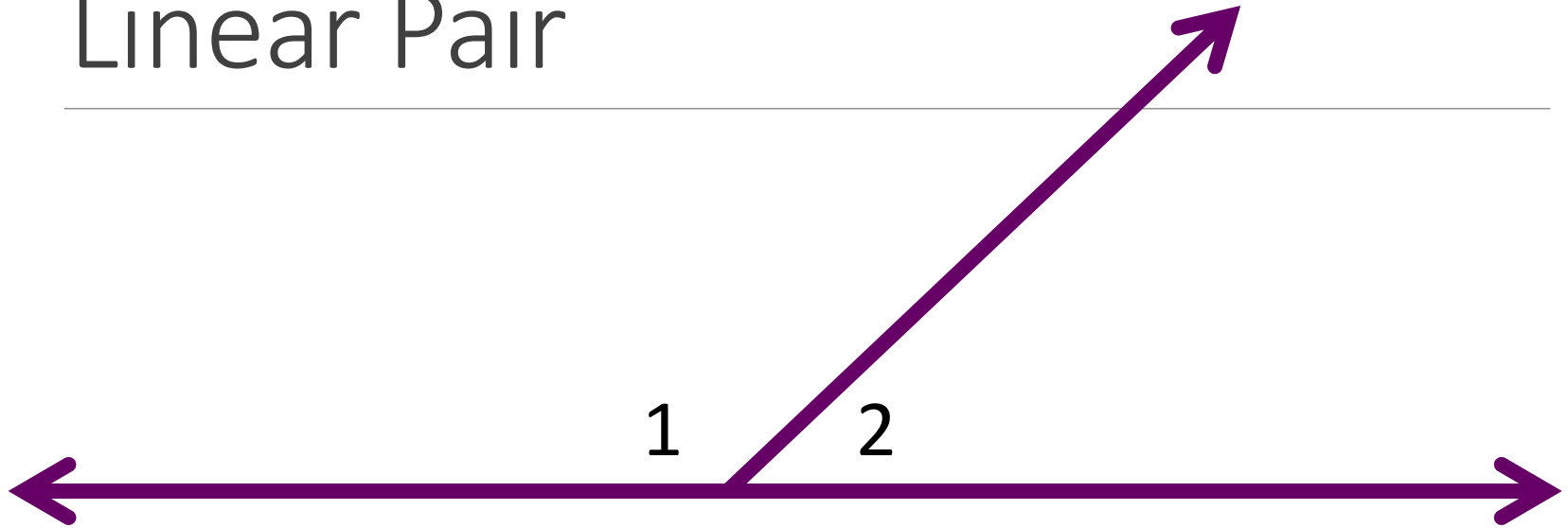*By the way, an angle <u>over</u> 180 degrees is called a "reflex" angle*

Adjacent Angles

Angles that are next to each other (share a side) are called adjacent angles.
1 and 2, 3 and 4, 1 and 3, and 2 and 4

Linear Pair

Angles that form a linear pair are two adjacent angles that together form a line

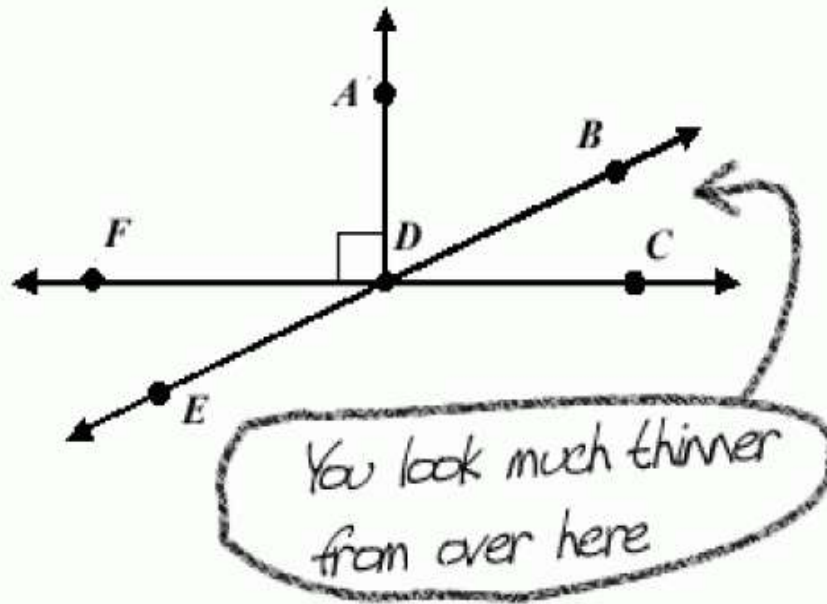If I add together the measure of angle one and the measure of angle two what should I get?
180 degrees

Check In

If one angle of a linear pair is acute, then the other angle must be obtuse. Explain why.

Complementary Angles

Complementary Angles are two angles whose measures add up to 90°.

Supplementary Angles are two angles whose measures add up to 180°.

(They don't have to be adjacent!!!)

Check In

What is the difference between supplementary angles and a linear pair of angles?

What is the **complement** of a 50° angle?

What is the **supplement** of a 50° angle?
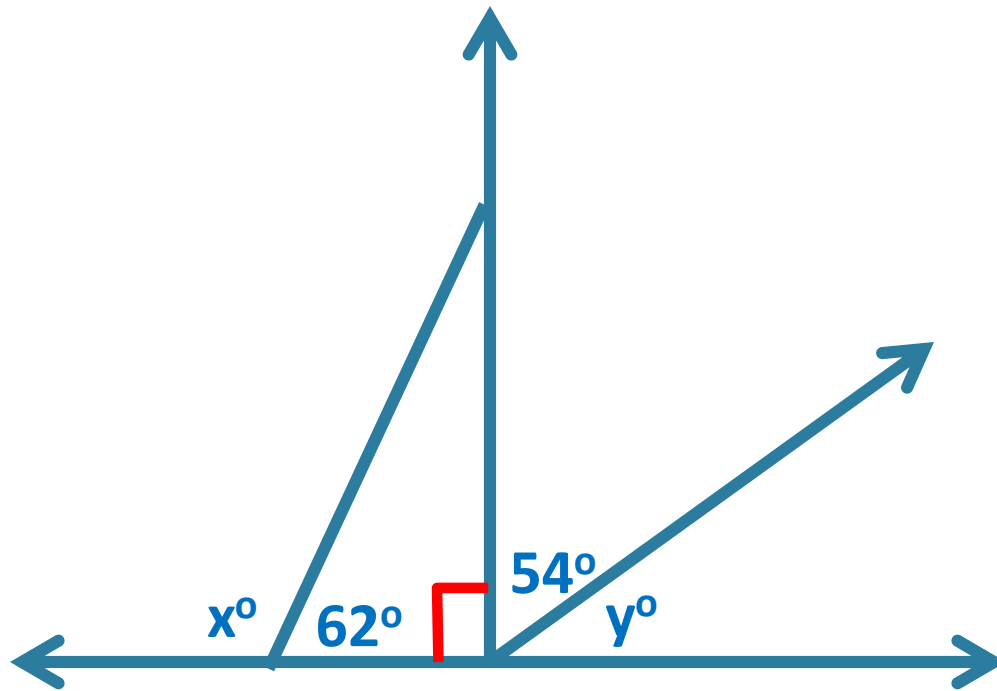
What is the **complement** of a 27° angle?

What is the **supplement** of a 102° angle?

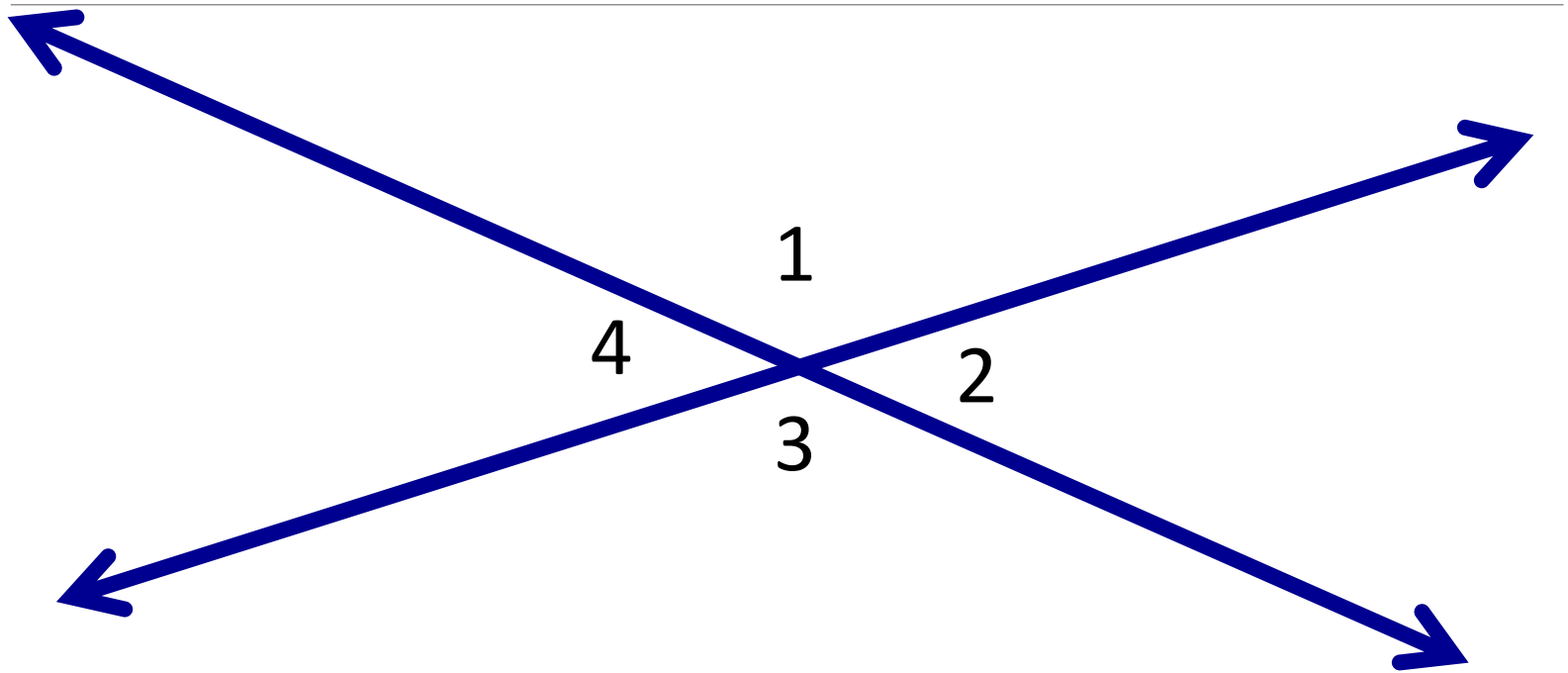What is the **supplement** of a 155.5° angle?

What is the **complement** of a 45° angle?

What is the **complement** of a 95° angle?

Find the missing angle measures:

When two lines intersect, the angles that are opposite of each other are vertical angles
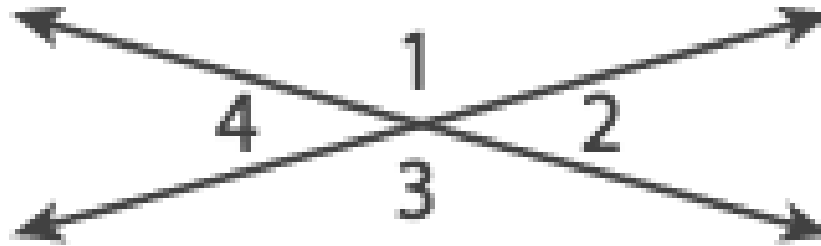

Which ones are vertical angles?
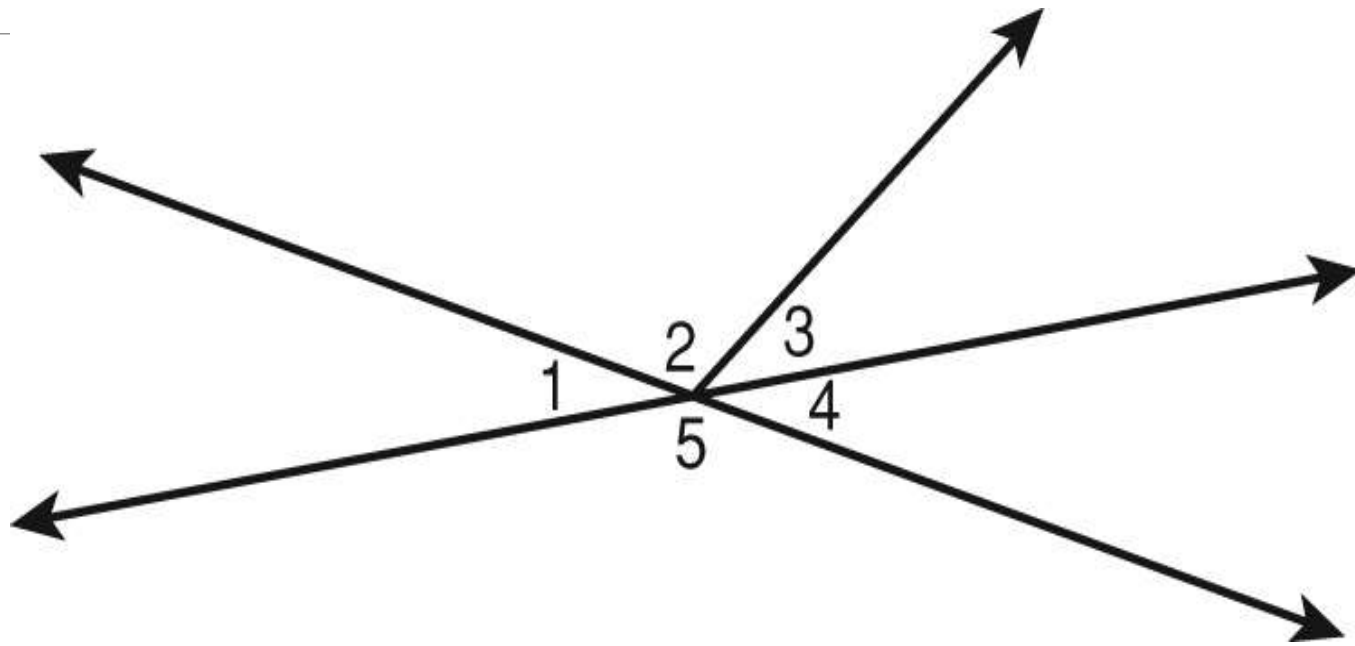
$\angle 1 \cong \angle 3$ $\angle 2 \cong \angle 4$

Small Intro to Proofs

Given: $\angle 2$ and $\angle 4$ are vertical angles.
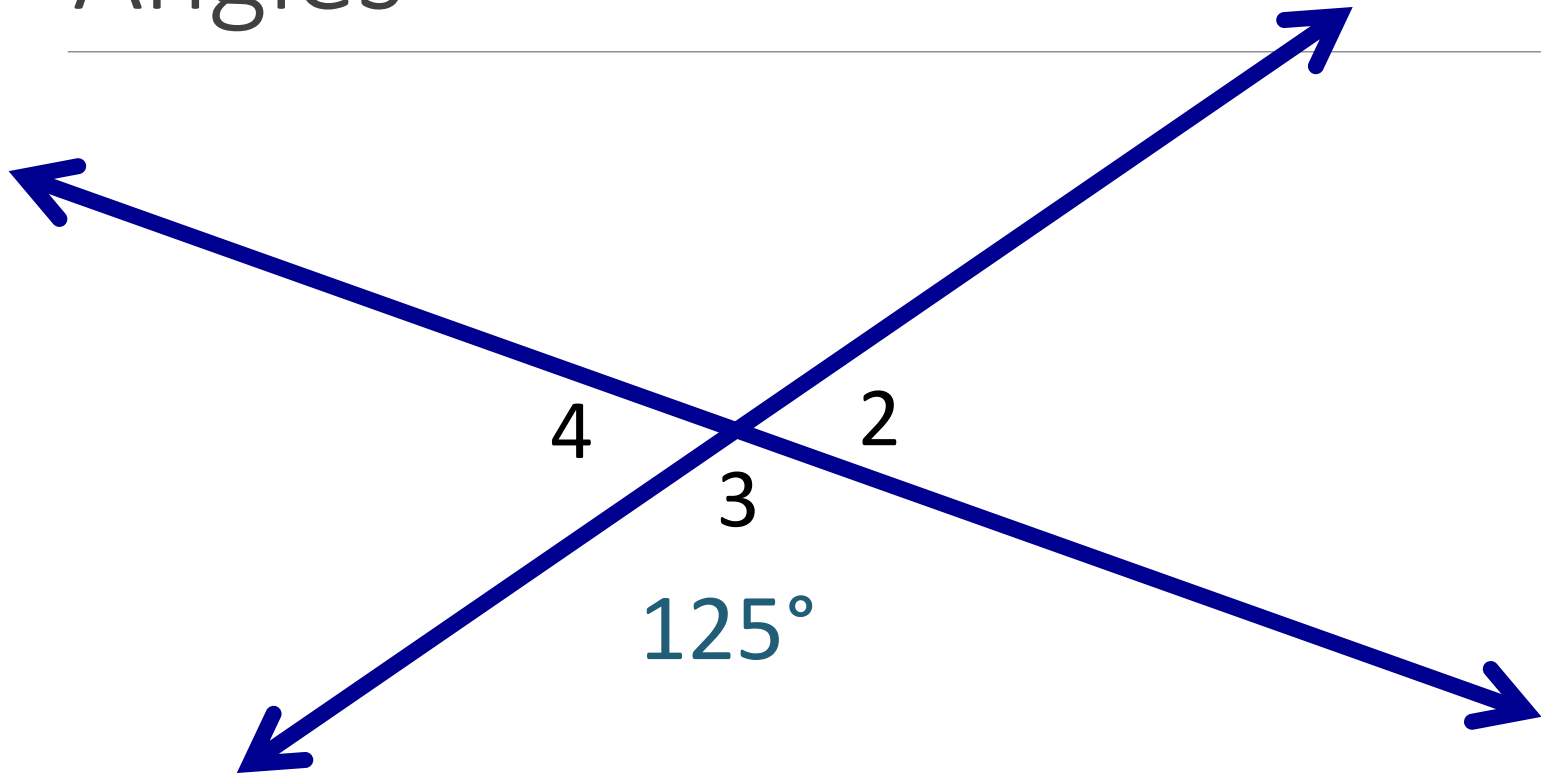
Prove: $\angle 2 \cong \angle 4$
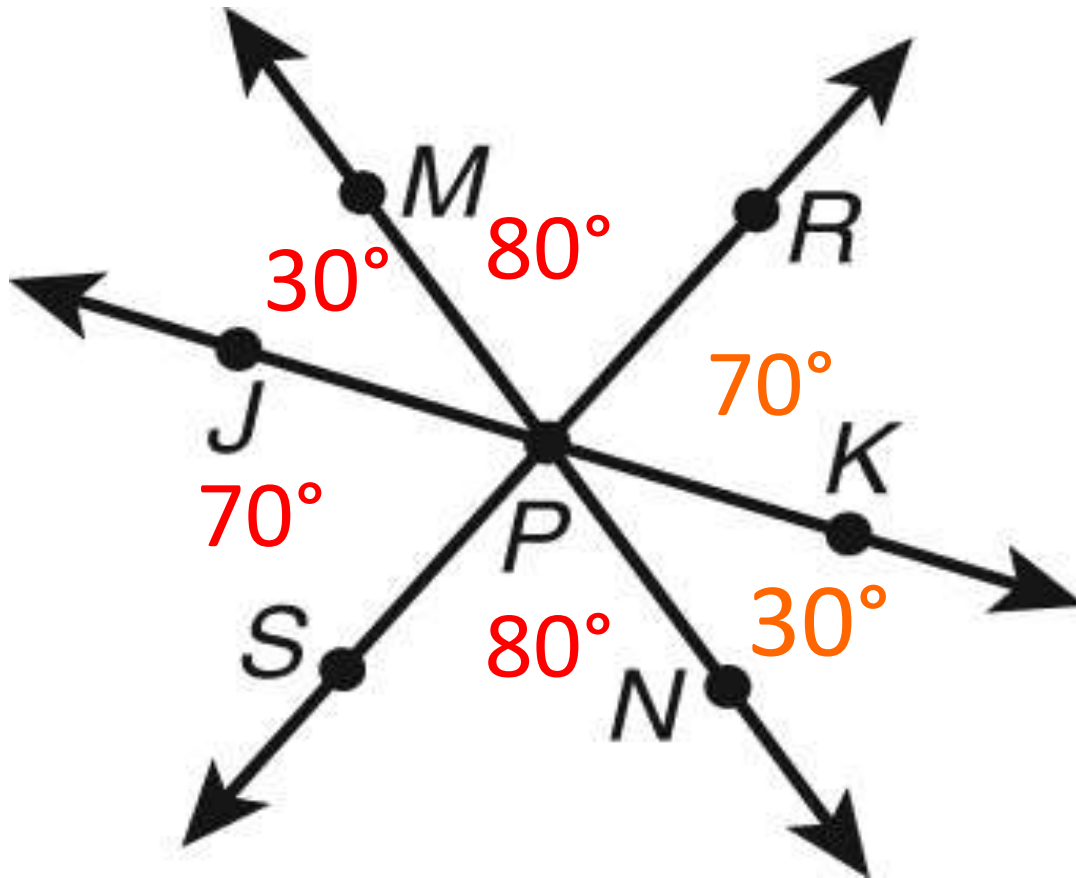
Check In: Name those Angle Pairs!!!

1) Name a linear pair of angles   4 and 5
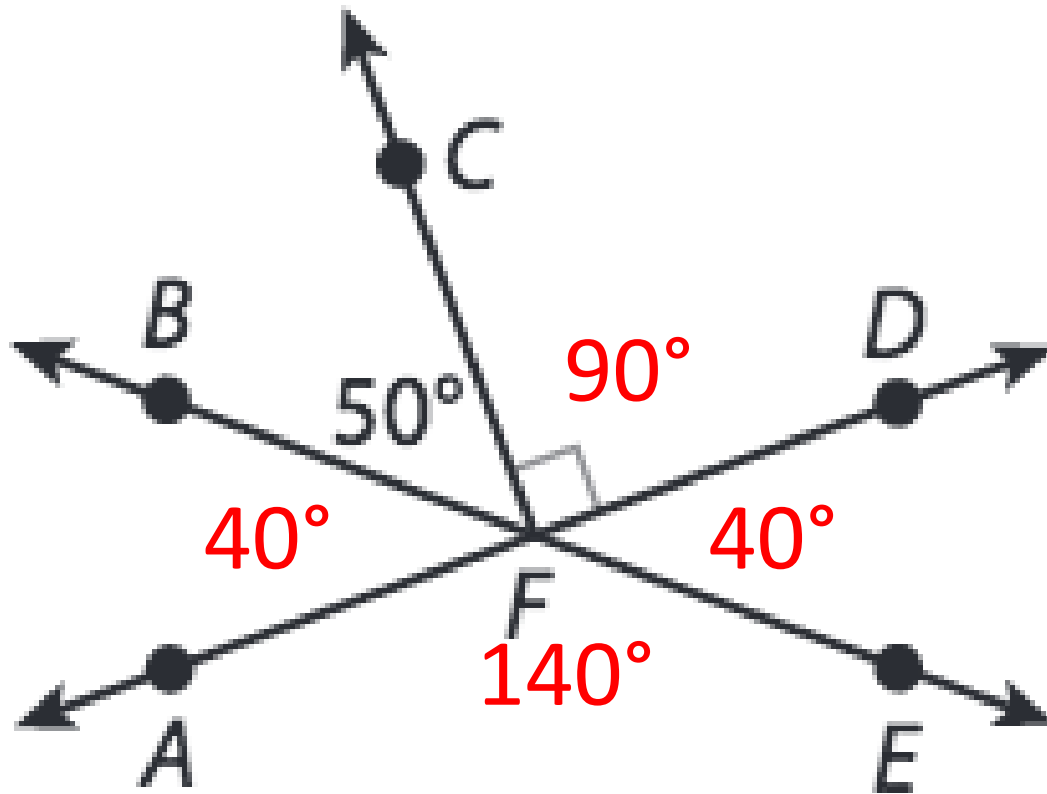2) Name a pair of vertical angles   1 and 4

Find the Measure of all of the Angles

Find the measurement of all other angles in the picture.

Find all the remaining angle measures.
Give a reason for each.

Summary:
Name an example of each of the following:

An acute angle

An obtuse angle
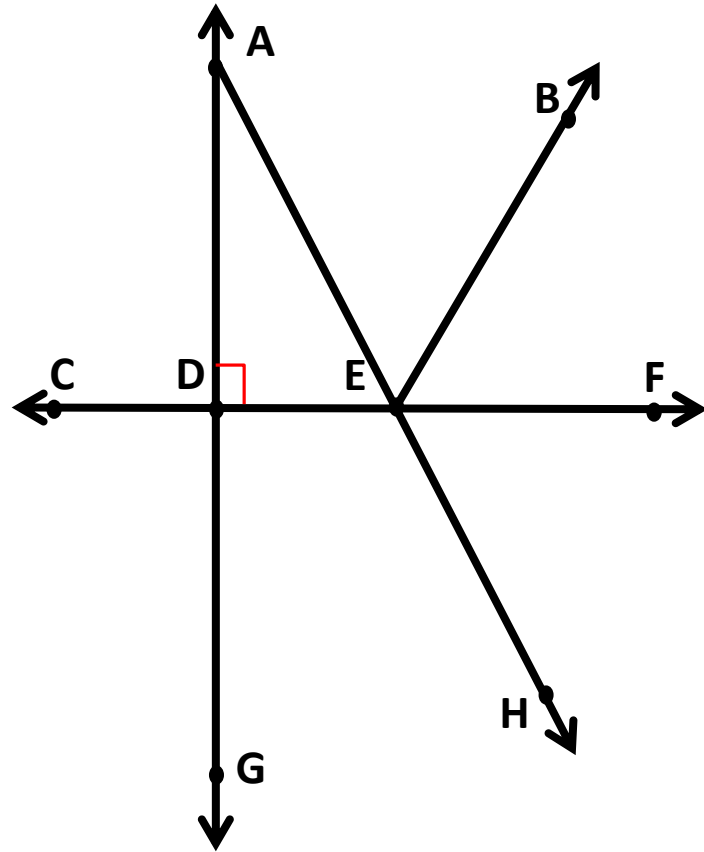
A right angle

A straight angle

A pair of adjacent angles
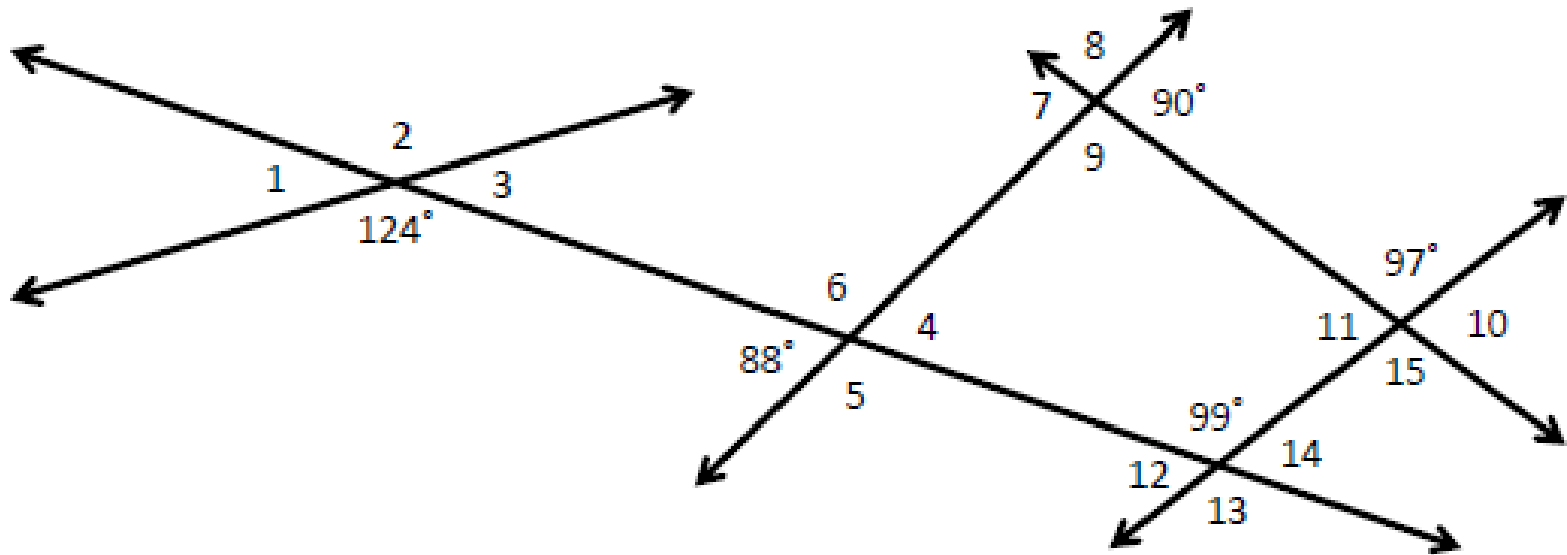
A pair of vertical angles

A pair of complementary angles

A pair of supplementary angles
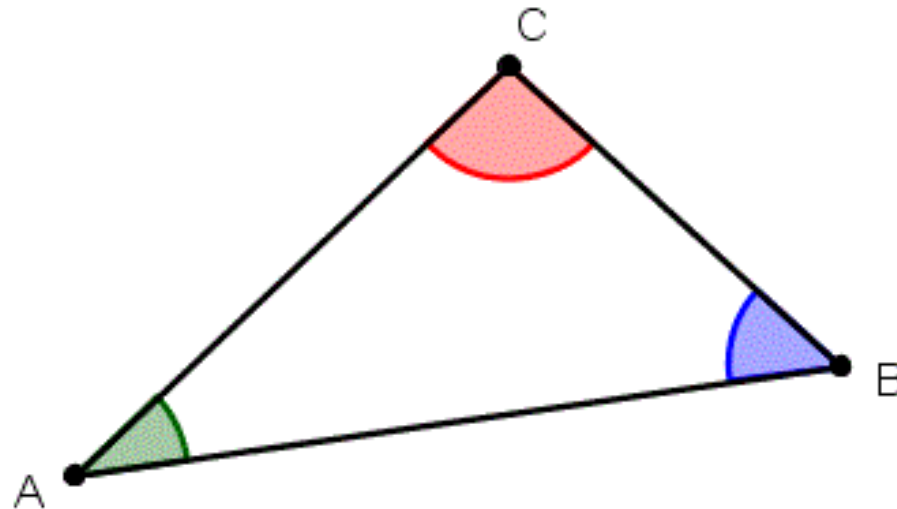
A pair of congruent angles

Solving for missing angles

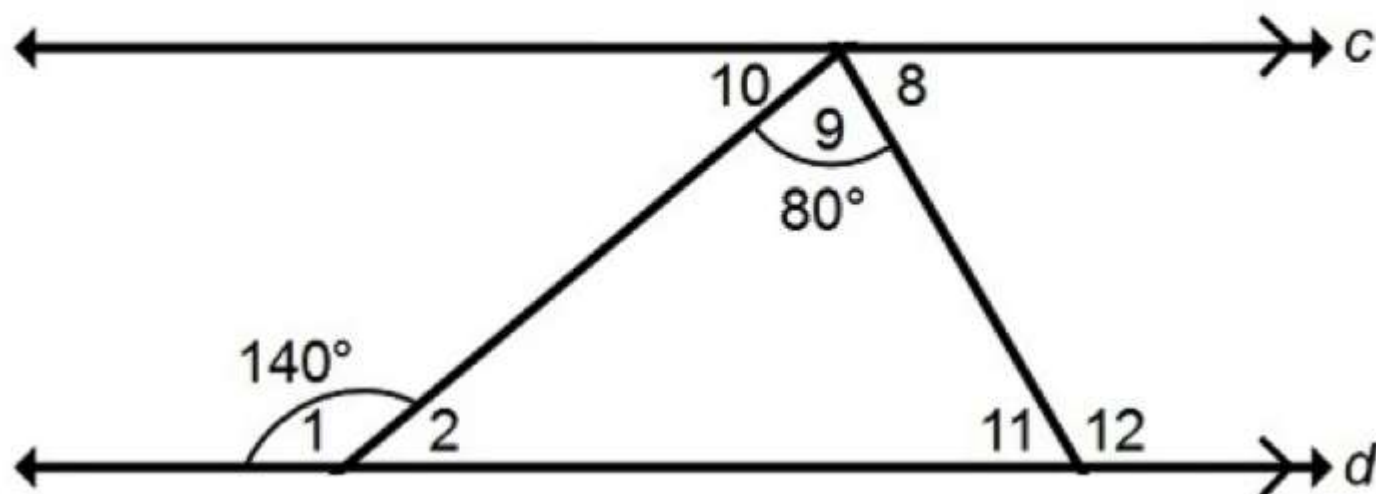| Angle	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Measure (number of degrees)	56°	124°	56°	88°	92°	92°	90°	90°	90°	83°	83°	81°	99°	81°	97°

Do you remember?

Triangle Angle Sum Theorem: The sum of the measures of the interior angles of a triangle are 180°

$$m\angle A + m\angle B + m\angle C = 180$$

Find the measures of ∠2 and ∠11.

Homework!

Complete Pg. 939 1- 9

And the ½ sheet