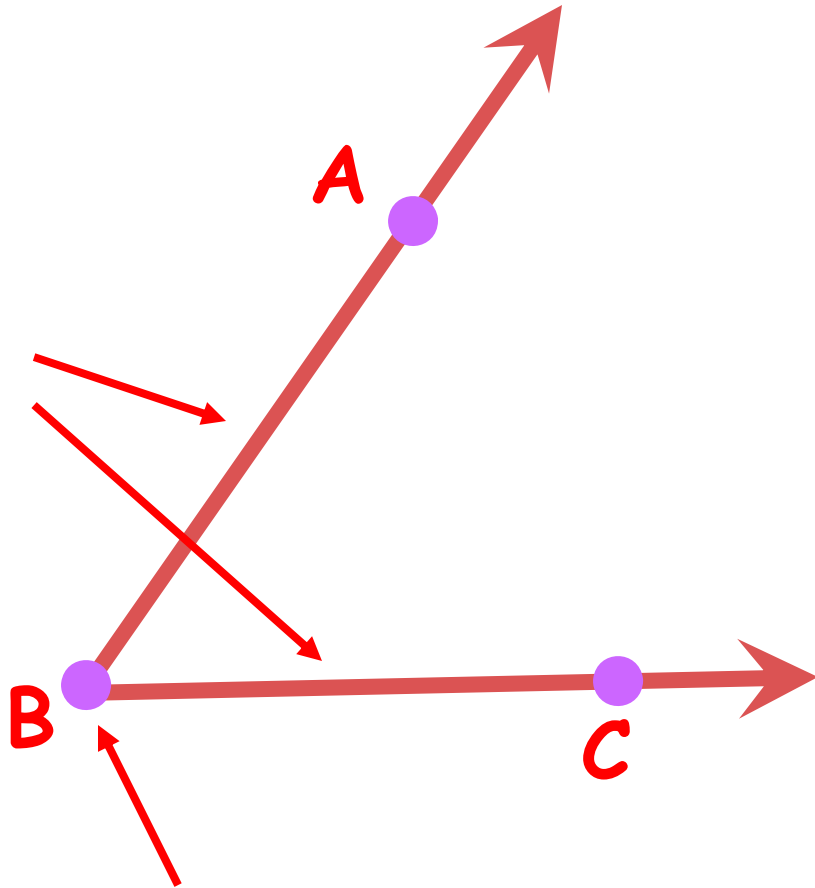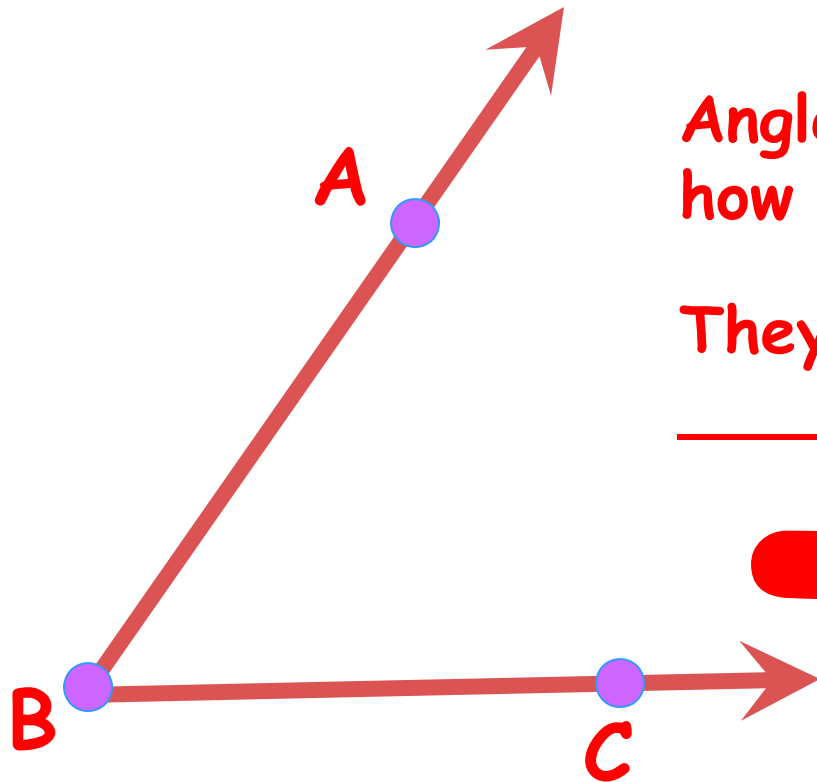# 12.1-12.2

SPECIAL PAIRS OF ANGLES

Naming an Angle

Measurement of Angles
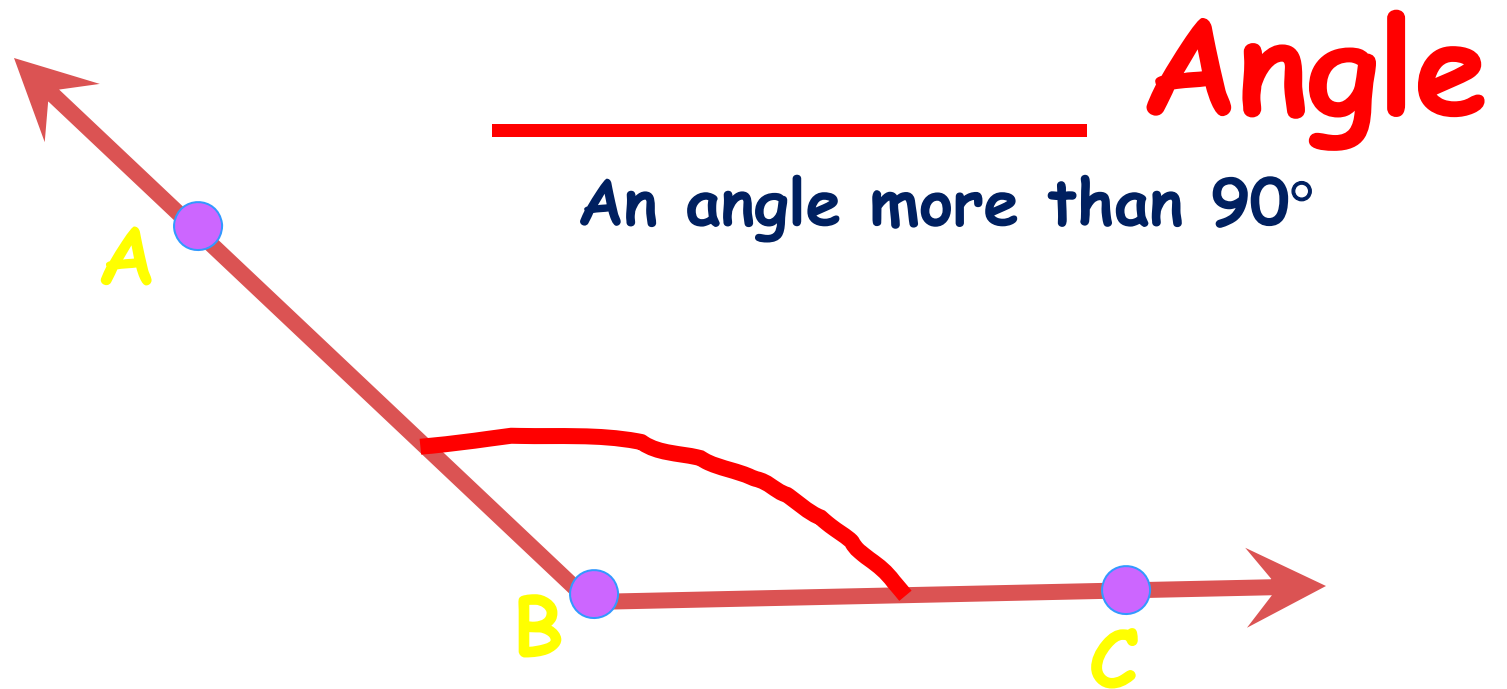
A

B

C

Angles are measured on how open they are.

They're measured by _____.
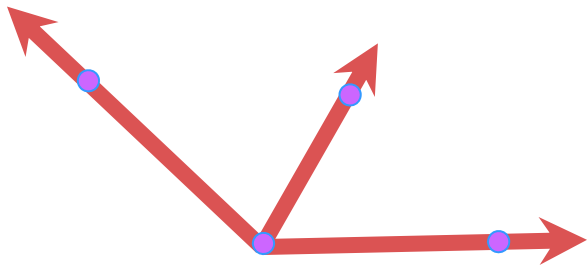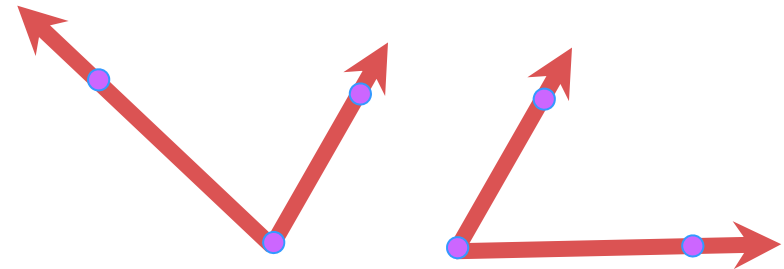
70°

Kinds of Angles

_____ **Angle**

An angle less than 90°

Kinds of Angles

A

B

C

_____ **Angle**

An angle that is exactly 90°

Kinds of Angles

Angle

An angle more than 90°

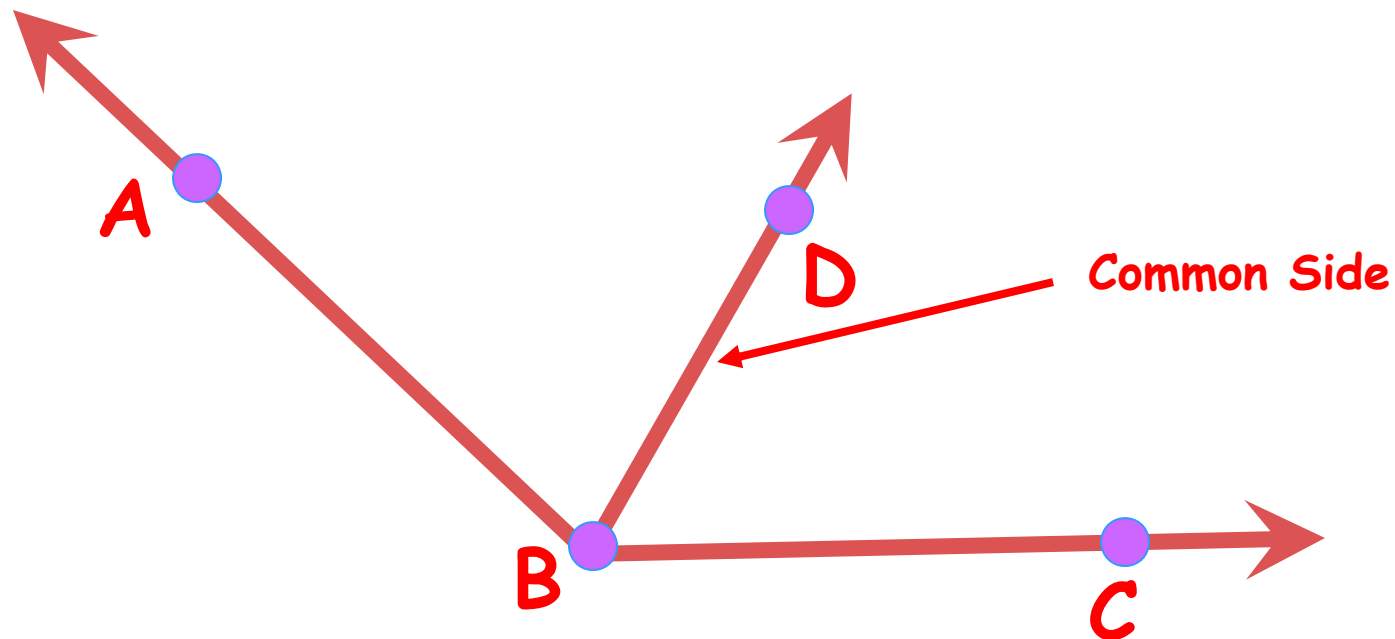# WHAT ARE ADJACENT ANGLES?

Adjacent Angles

Not Adjacent Angles

ADJACENT ANGLES

A

D

Common Side

B
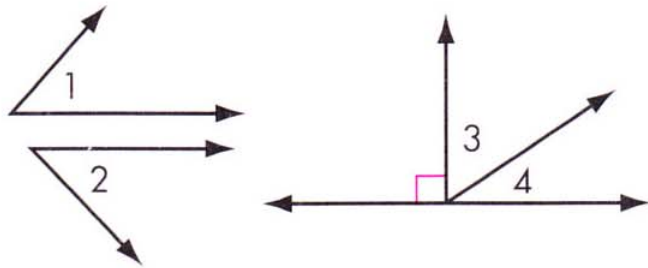
C

Adjacent angles are angles _____ to each other and share a _____ side
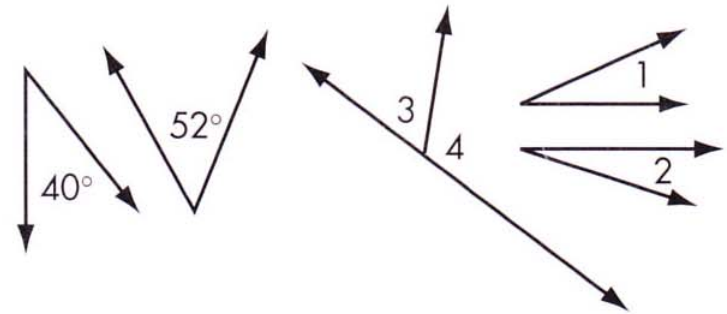
1) Define complementary angles

Pairs of complementary angles

Not pairs of complementary angles

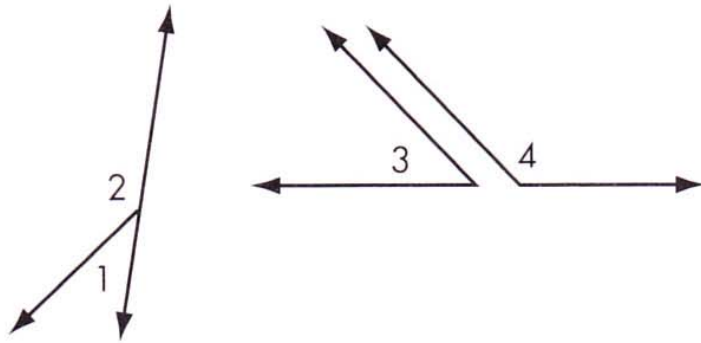$m\angle 1 + m\angle 2 = 90°$

$m\angle 3 + m\angle 4 = 90°$

$m\angle 1 + m\angle 2 < 90°$

Note: Sometimes it's convenient to name angles in a diagram with a number.
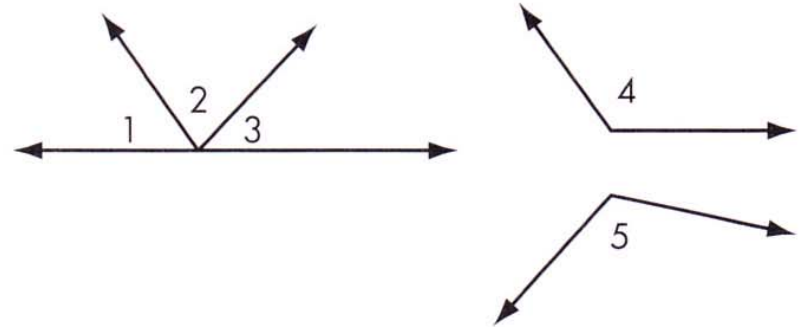
2) Define supplementary angles

Pairs of supplementary angles

Not pairs of supplementary angles

$$m\angle 1 + m\angle 2 = 180°$$
$$m\angle 3 + m\angle 4 = 180°$$

$$m\angle 1 + m\angle 2 < 180°$$
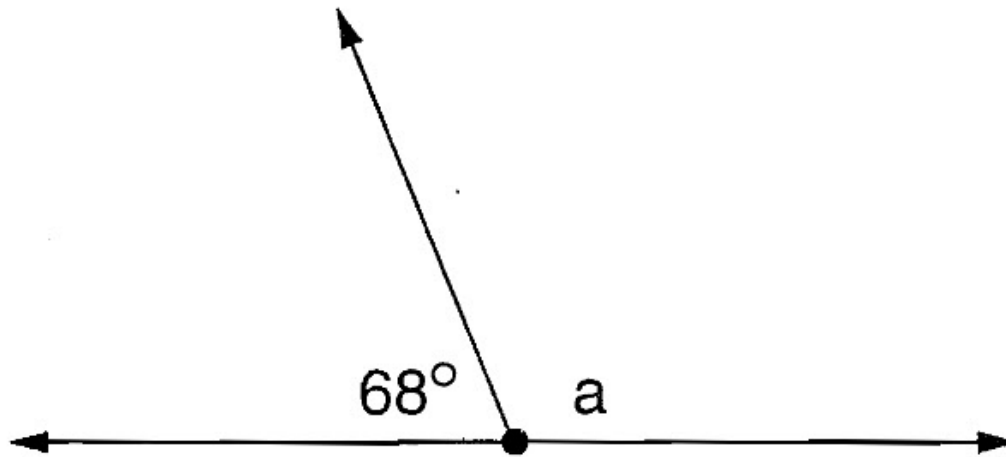$$m\angle 4 + m\angle 5 > 180°$$

Find the missing angle.

68° a

3) Define vertical angles

Pairs of vertical angles

Not pairs of vertical angles
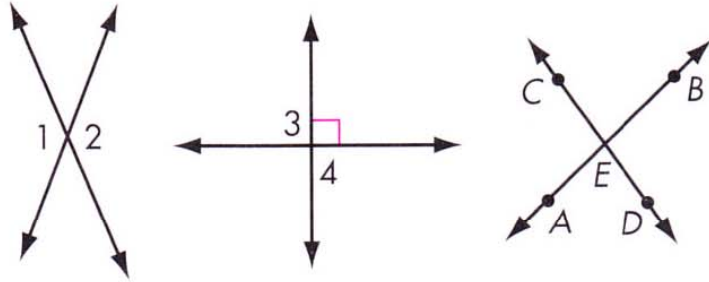
∠1 and ∠2 are a pair of vertical angles.
∠3 and ∠4 are also vertical angles.
∠AED and ∠BEC are also vertical angles.
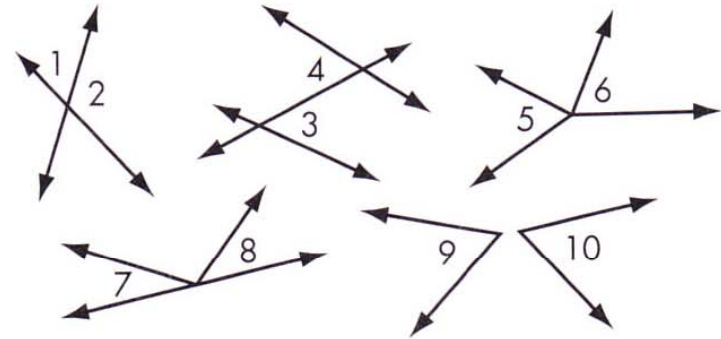
∠1 and ∠2, ∠3 and ∠4, ∠5 and ∠6, ∠7 and ∠8, and ∠9 and ∠10 are not pairs of vertical angles.

Find the missing angles.
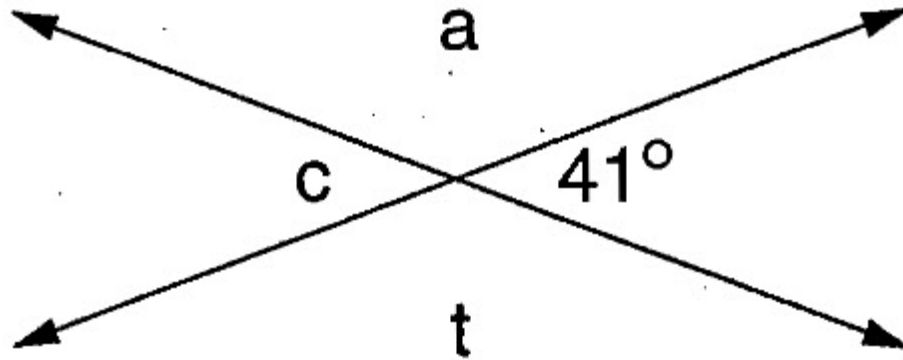
Do you understand?

Name *two pairs* of adjacent angles and *two pairs* of vertical angles in the figure.
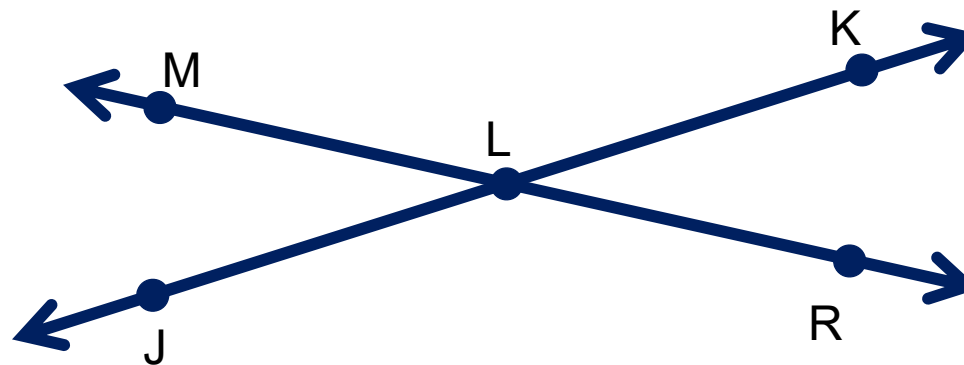
Adjacent Angles

a) _____ & _____

b) _____ & _____

Vertical Angles

a) _____ & _____

b) _____ & _____

Do you understand?

Use the given information to solve each problem.

Angle 1 and 2 are *supplementary*.

$$m\angle 1 = 50° \text{ and } m\angle 2 = 3x°$$

a) Write an equation and find the value of x.

b) Use the value of x to find the measure of angle 2.

Do you understand?

Use the given information to solve each problem.

Angle 1 and 2 are *complementary*.

$$m\angle 1 = x° \ and \ m\angle 2 = 2x°$$

a) Write an equation and find the value of x.

b) Use the value of x to find the measure of angle 2.