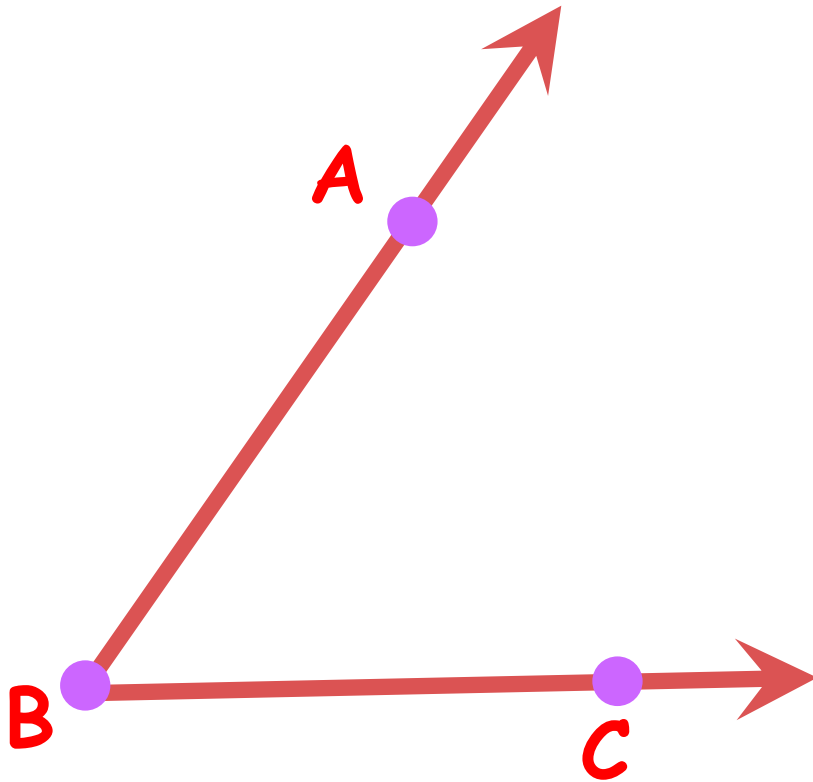


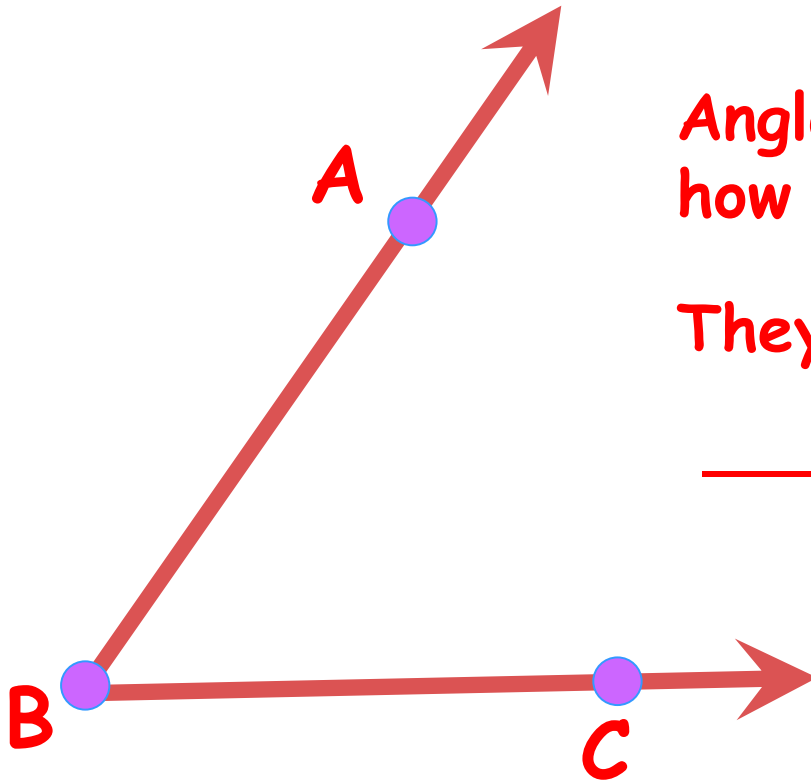
# 7.1

## **Adjacent and Vertical Angles**

# Naming an Angle



# Measurement of Angles



Angles are measured on  
how open they are.

They're measured by

\_\_\_\_\_.

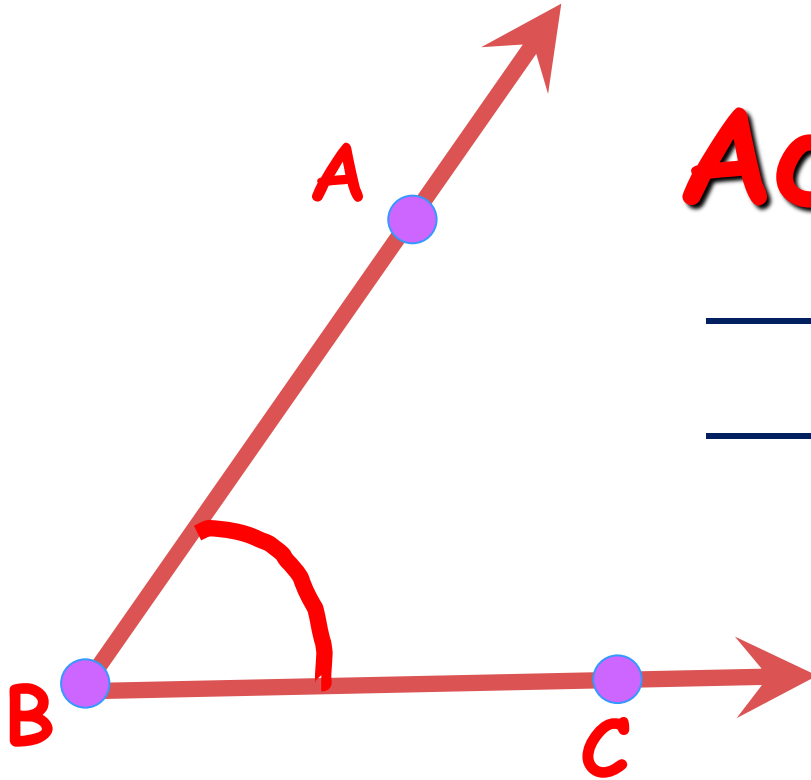
**NEW WORD!**

**CONGRUENT**

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# Kinds of Angles

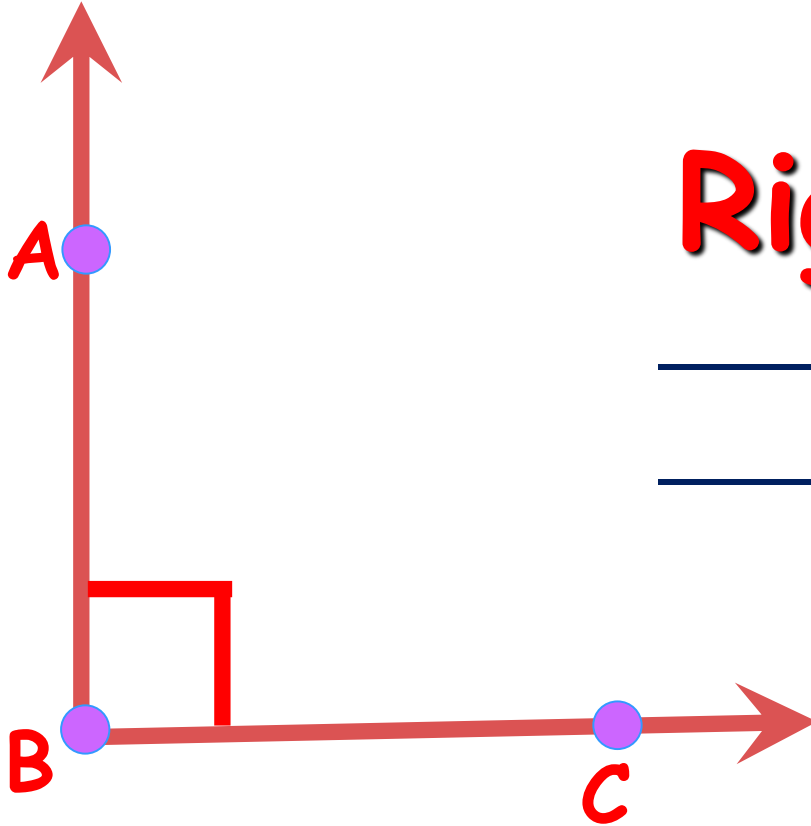


**Acute Angle**

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# Kinds of Angles



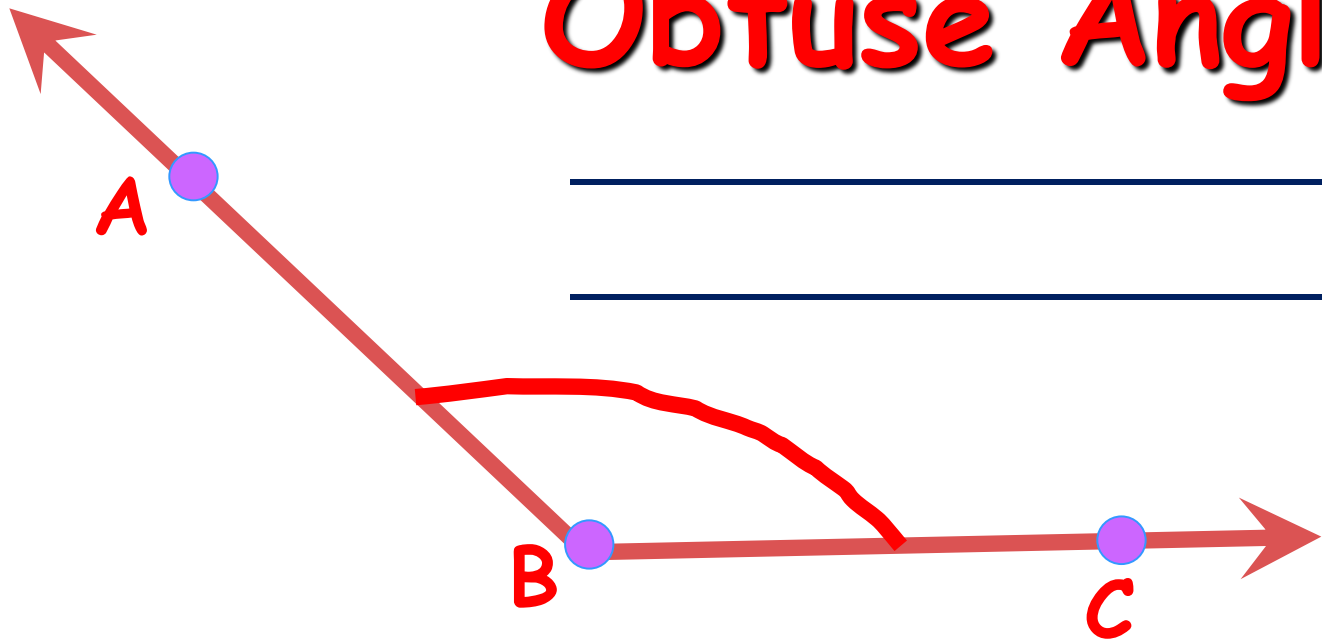
Right Angle

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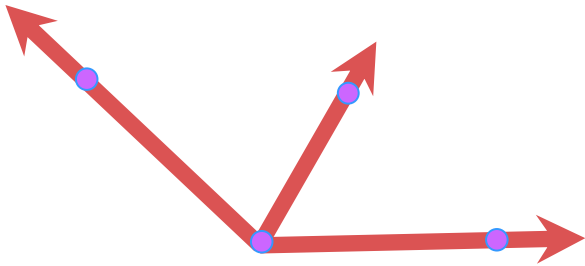
# Kinds of Angles

**Obtuse Angle**

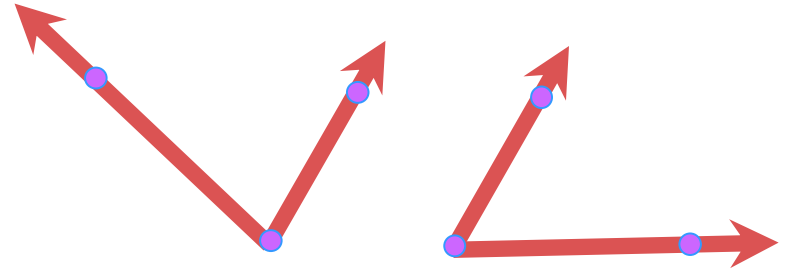


# WHAT ARE ADJACENT ANGLES?

**Adjacent Angles**

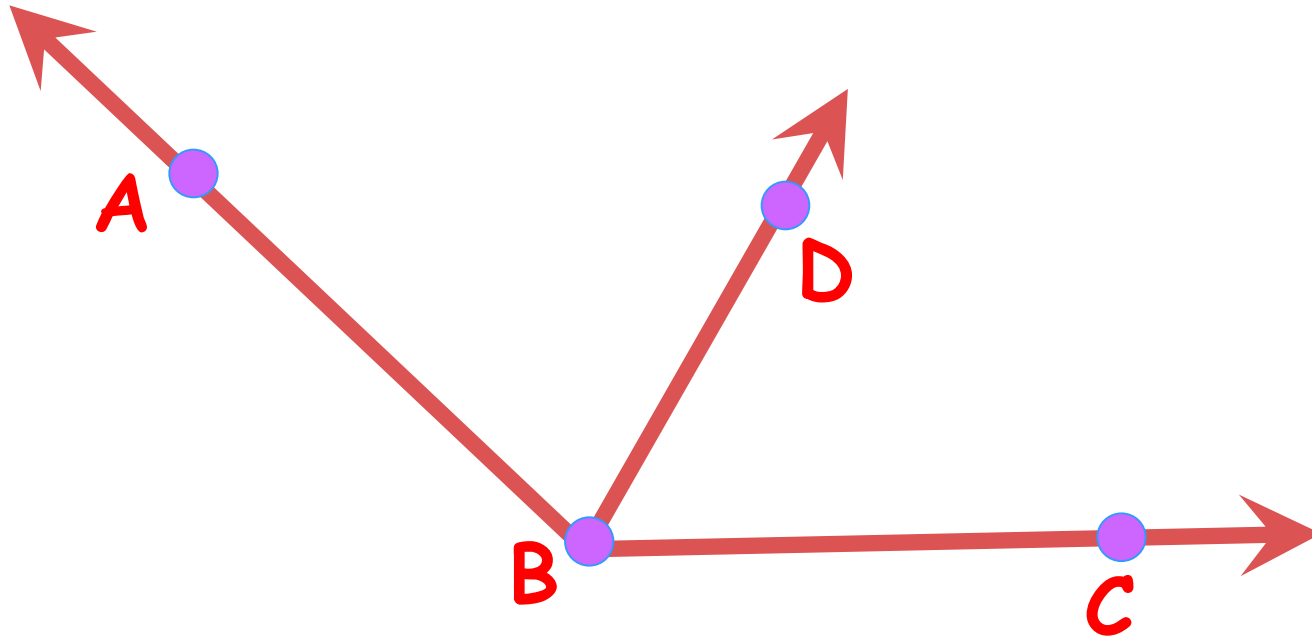


**Not Adjacent Angles**





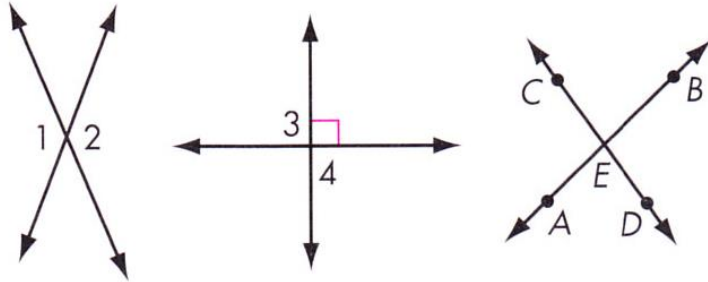
# ADJACENT ANGLES



Adjacent angles are angles \_\_\_\_\_  
\_\_\_\_\_ other and \_\_\_\_\_ a  
\_\_\_\_\_.

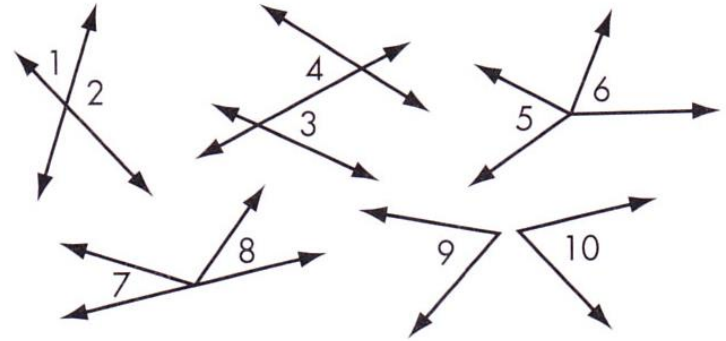
# Define vertical angles

Pairs of vertical angles



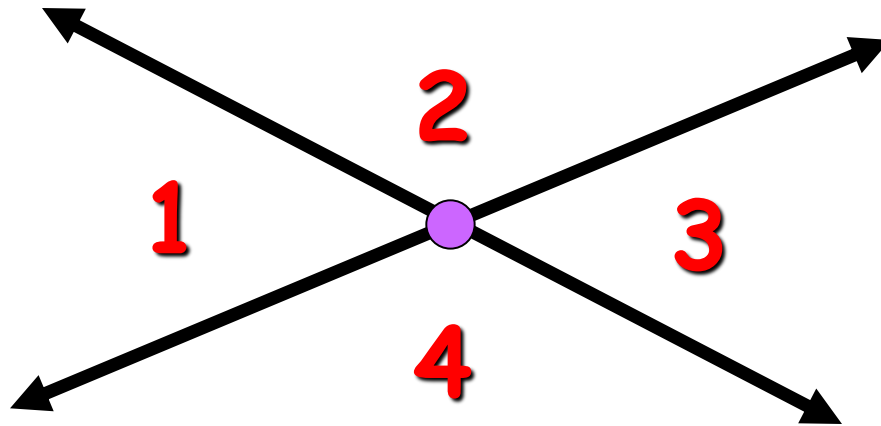
$\angle 1$  and  $\angle 2$  are a pair of vertical angles.  
 $\angle 3$  and  $\angle 4$  are also vertical angles.  
 $\angle AED$  and  $\angle BEC$  are also vertical angles.

Not pairs of vertical angles



$\angle 1$  and  $\angle 2$ ,  $\angle 3$  and  $\angle 4$ ,  $\angle 5$  and  $\angle 6$ ,  $\angle 7$  and  $\angle 8$ , and  $\angle 9$  and  $\angle 10$  are not pairs of vertical angles.

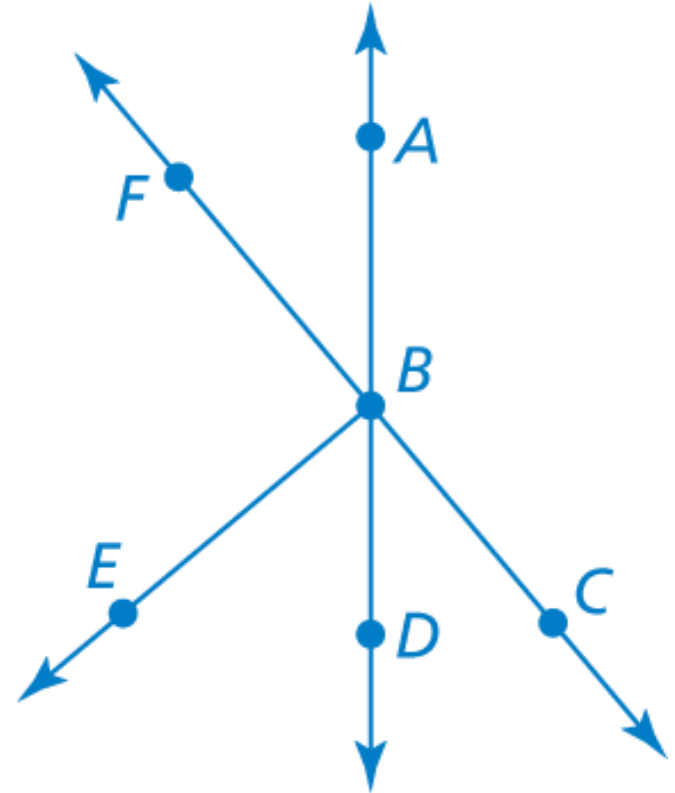
# VERTICAL ANGLES



Vertical angles are \_\_\_\_\_ angles when two \_\_\_\_\_. They are \_\_\_\_\_ to each other.

# Practice

a) Name a pair of adjacent angles.



b) Name a pair of vertical angles.

# Do you understand?

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

**Adjacent Angles**

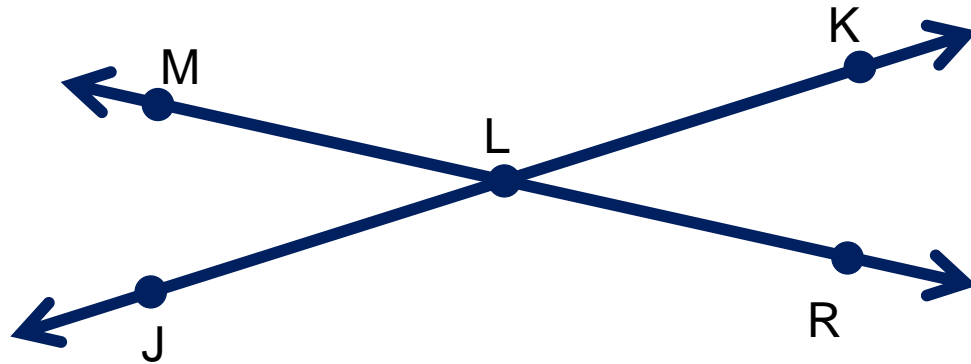
a) \_\_\_\_\_ & \_\_\_\_\_

b) \_\_\_\_\_ & \_\_\_\_\_

**Vertical Angles**

a) \_\_\_\_\_ & \_\_\_\_\_

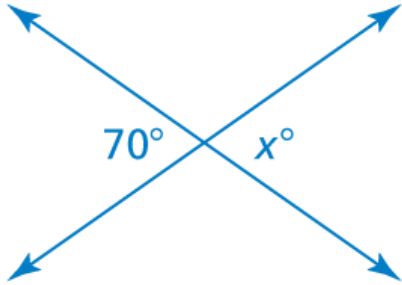
b) \_\_\_\_\_ & \_\_\_\_\_



# Practice

Tell whether the angles are adjacent or vertical. Then find the value of  $x$ .

a.



b.

