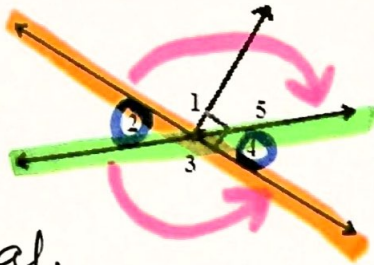


Vocabulary  
Vertical Angles:-

2  $\angle$ 's that are across an X from each other.

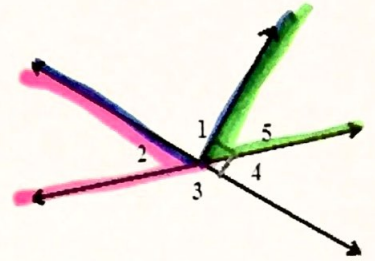


\* they are equal.

Adjacent Angles:

Neighbor  $\angle$ 's

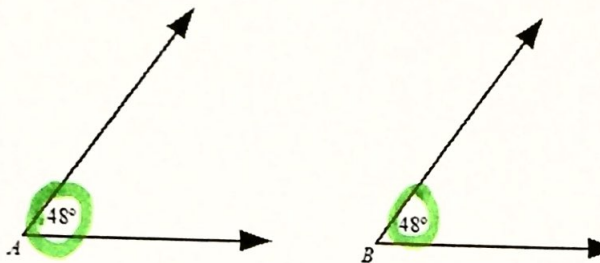
• share a side



Congruent Angles:

Twin  $\angle$ 's

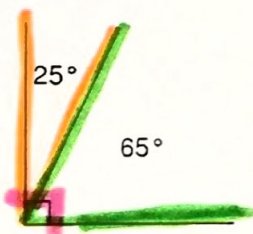
• The same measure



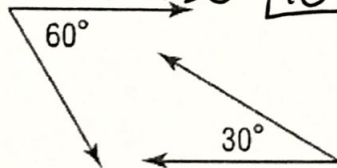
Complementary Angles:

2  $\angle$ 's that add up to  $90^\circ$

$25 + 65 = 90^\circ$



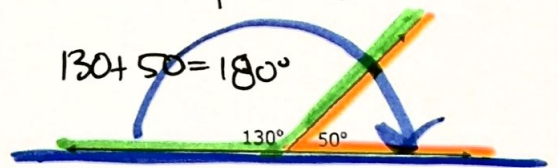
$60 + 30 = 90^\circ$



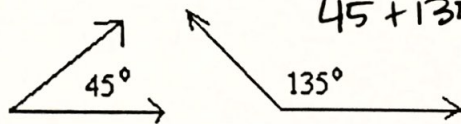
Supplementary Angles:

2  $\angle$ 's that add up to  $180^\circ$

$130 + 50 = 180^\circ$

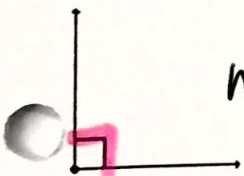


$45 + 135 = 180^\circ$



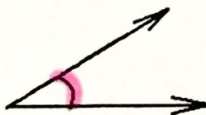
Right Angles:

$90^\circ$   
make a perfect corner



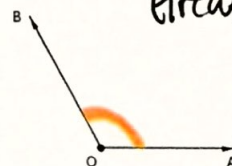
Acute Angles:

Less than  $90^\circ$



Obtuse Angles:

Greater than  $90^\circ$

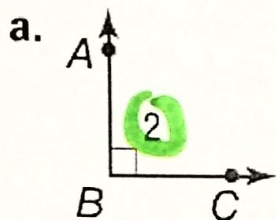


Notes 5-1

Int 1 Classifying Angles & Supplementary/Complementary Unit 5

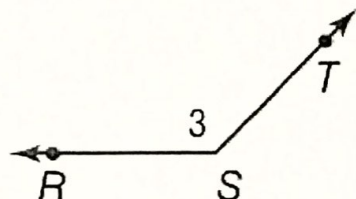
Ex. 1 Name each angle in four ways. Then classify each angle as acute, right, obtuse, or straight.

This is a(n) right angle



Angle names include:  $\angle 2$   
 $\angle B$   
 $\angle ABC$   
 $\angle CBA$

b.



This is a(n) obtuse angle

Angle names include:  $\angle 3$   
 $\angle S$   
 $\angle TSR$   
 $\angle RST$

Ex. 2) Refer to the diagram. Identify each angle pair as adjacent, vertical, or neither.

d.  $\angle 2$  and  $\angle 5$

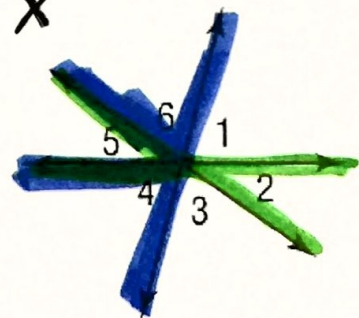
vertical

e.  $\angle 4$  and  $\angle 6$

Neither

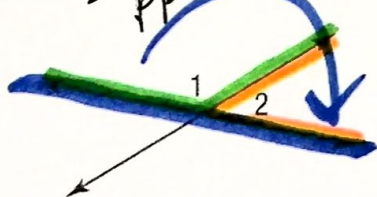
f.  $\angle 3$  and  $\angle 4$

adjacent

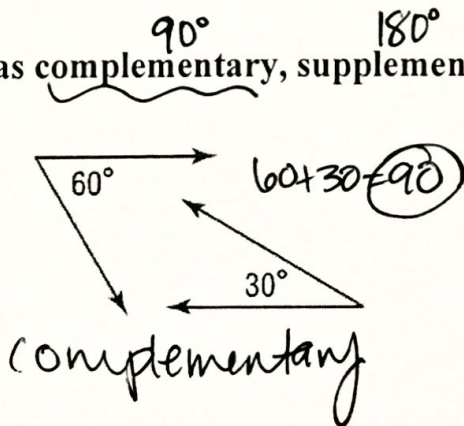


Ex. 3 Identify each pair of angles as complementary, supplementary or neither.

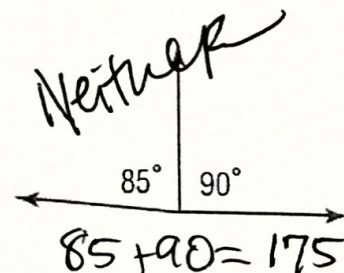
g) Supplementary



h)



i)





Notes 5-1

Int 1 Classifying Angles & Supplementary/Complementary

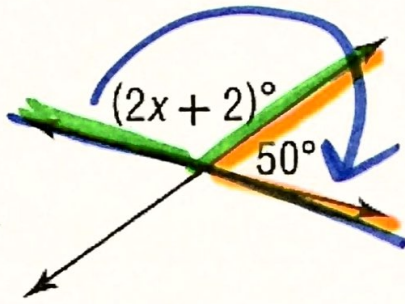
Unit 5

Ex. 4 For the next two problems, identify the type of angle that is shown.

Then, set up an equation to solve for the missing value.

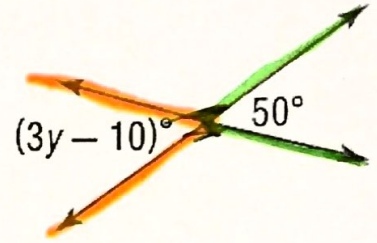
j) What is the value of x?

$$\begin{array}{r}
 20 + 2 + 50 = 180 \\
 \hline
 2x + 5 = 180 \\
 -5 \quad -5 \\
 \hline
 2x = 128 \\
 \frac{2x}{2} = \frac{128}{2} \\
 \boxed{x = 64}
 \end{array}$$



k) What is the value of y?

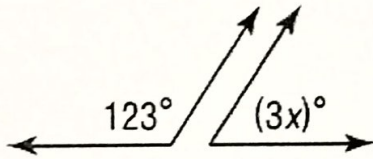
$$\begin{array}{r}
 3y - 10 = 50 \\
 +10 \quad +10 \\
 \hline
 3y = 60 \\
 \frac{3y}{3} = \frac{60}{3} \\
 \boxed{y = 20}
 \end{array}$$



Ex. 5

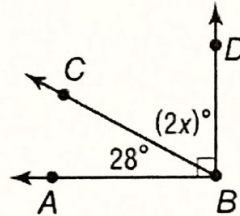
The angles shown are supplementary.

l) Find the value of x.



$$\begin{array}{r}
 123 + 3x = 180 \\
 -123 \quad -123 \\
 \hline
 3x = 57 \\
 \frac{3x}{3} = \frac{57}{3} \\
 \boxed{x = 19}
 \end{array}$$

m) Find the value of x.



$$\begin{array}{r}
 2x + 28 = 90 \\
 28 + 2x = 90 \\
 -28 \quad -28 \\
 \hline
 2x = 62 \\
 \frac{2x}{2} = \frac{62}{2} \\
 \boxed{x = 31}
 \end{array}$$