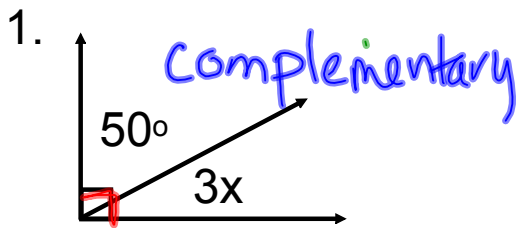


9-23-14

What is the value of x ?

$$50 + 3x = 90$$

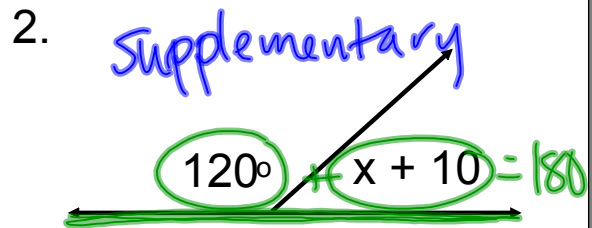
$$\begin{array}{r} -50 \\ \hline \end{array}$$



$$3x = 40$$

$$\begin{array}{r} \cancel{3} \\ \hline \end{array}$$

$$x \approx 13.\bar{3}$$



$$120 + x + 10 = 180$$

$$130 + x = 180$$

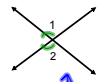
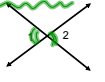
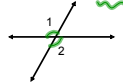
$$\begin{array}{r} -130 \\ \hline \end{array}$$

$$x = 50$$

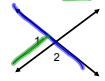
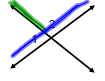
2.4 - Vertical Angles and Linear Pairs

Vertical Angles: (looks like a bowtie)

Two angles (not adjacent) formed by 2 intersecting lines

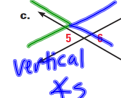
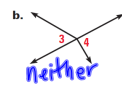
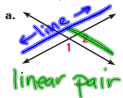
*NOT Vertical*Linear Pair:

Two adjacent angles whose sides form a line



Ex. 1

Determine whether the labeled angles are vertical angles, a linear pair, or neither.

CongruentVertical Angles are Congruent (same)

**Set the two angles equal to each other



$$100 = x/2$$

Solve for x . $x = 100$ Linear Pair are Supplementary

**These angles add up to 180



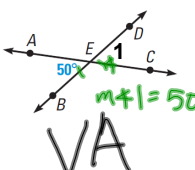
$$100 + y = 180$$

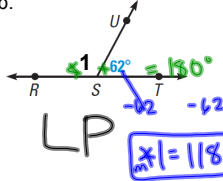
$$y = 80$$

Solve for y .

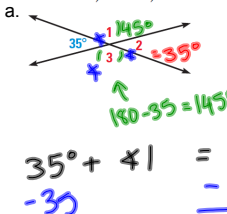
Ex. 2 VA (vertical $\angle$) LP (linear pair)
 $x_1 = x_2$ $m\angle 1 + m\angle 2 = 180^\circ$

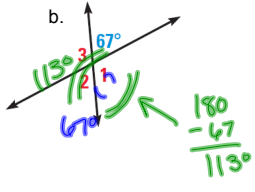
Determine what type of angles are shown: Vertical Angles or a Linear Pair
 What is $m\angle 1$?

a.  $m\angle 1 = 50^\circ$
 VA

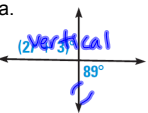
b.  $x_1 + 62^\circ = 180^\circ$
 LP $x_1 = 118^\circ$

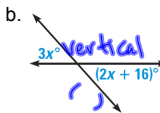
Ex. 3
 Find $m\angle 1$, $m\angle 2$, and $m\angle 3$.

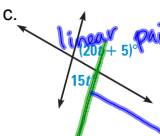
a.  $180 - 35 = 145^\circ$
 $35^\circ + x_1 = 180^\circ$
 -35
 $x_1 = 145^\circ$

b.  $180 - 67 = 113^\circ$
 $113^\circ + x_1 = 180^\circ$
 -113
 $x_1 = 67^\circ$

Ex. 4
 Find the value of the variable.

a.  $2r+3 = 89$
 $-3 \quad -3$
 $2r = 86$
 $\div 2 \quad \div 2$
 $r = 43$

b.  $3x = 2x+16$
 $-2x \quad -2x$
 $x = 16$

c.  $20t+5 = 15t$
 $20t+5 = 180$
 $-5 \quad -5$
 $20t = 175$
 $\div 20 \quad \div 20$
 $t = 8.75$

Due Tomorrow:

2.4 pg. 78-80

#9-17, 20-29, 51-53