Agenda:

1. be on task
2. review Unit 2 - parallel lines

Today you will need:

- a calculator
- pencil

Housekeeping:

1. in class retest for Unit 2 or 2-3/4-2: Monday
2. retake deadline for 2-3/4-2 & Unit 2: Nov. 7

What should you work on?

You have 3 choices:

1. retest packet/worksheets for Unit 2

2. retest packet for triangles 2-3/4-2

3. alternate activity- see Ms. P if you do not plan to retest

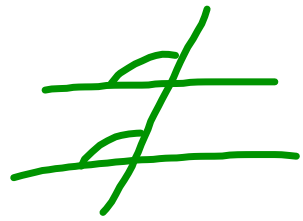
Topic 2 - Summary of Pairs of Angles

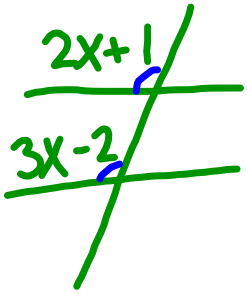
Type 1:
Name – **Corresponding Angles (CA)**

When $a \| b$, these angles are _____

≅ =
congruent / =

Examples of each pair:





So...

$2x+1 = 3x-2$

$-2x \quad -2x$

$1 \quad 1x-2$

$+2 \quad +2$

$3 = x$

Type 4:
Name – **Same Side Interior Angles (SSIA)**

When $a \| b$, these angles are _____

Type 5:
Name – **Vertical Angles (VA)**

These angles are _____

Type 6:
Name – **Linear Pair (LP)**

These angles are _____

Topic 2 - Summary of Pairs of Angles

Type 1:
Name – **Corresponding Angles (CA)**

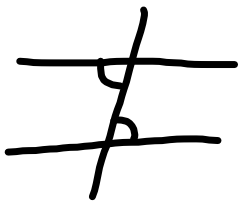
When $a \| b$, these angles are _____

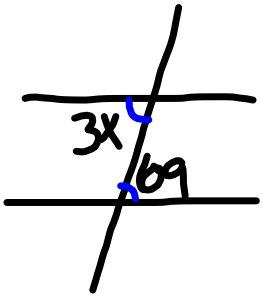
Examples of each pair:

Type 2:
Name – **Alternate Interior Angles (AIA)**

When $a \| b$, these angles are _____ ≅

Congruent/=
(they = each other!)





$\frac{3x}{3} = \frac{69}{3}$

X=13
to make the angles =

Type 5:
Name – **Vertical Angles (VA)**

These angles are _____

Type 6:
Name – **Linear Pair (LP)**

These angles are _____

Topic 2 - Summary of Pairs of Angles

Type 1: **Examples of each pair:**

Name – **Corresponding Angles (CA)**

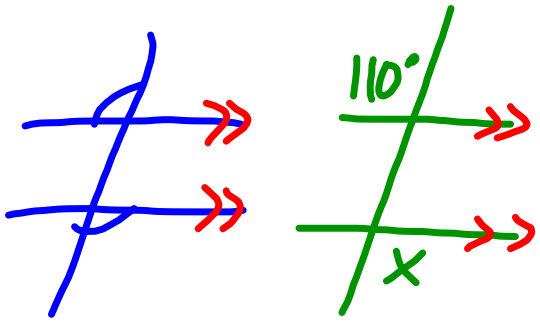
When $a \| b$, these angles are _____

Type 3:

Name – **Alternate Exterior Angles (AEA)**

When $a \| b$, these angles are $\cong$

Congruent



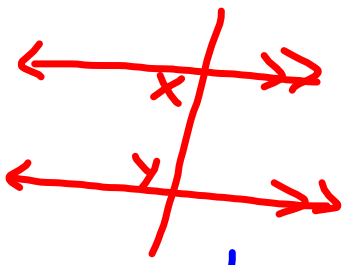
$x = 110°$

Type 4:

Name – **Same Side Interior Angles**

When $a \| b$, these angles are _____

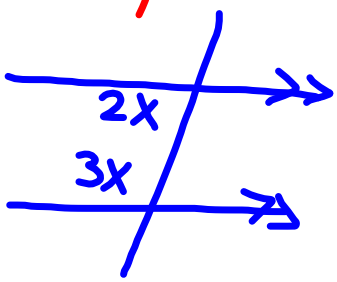
Supplementary (add to 180°)



$x + y = 180$

$2x + 3x = 180$

Solve for x



Topic 2 - Summary of Pairs of Angles

Type 1:
Name – **Corresponding Angles (CA)**

When $a \| b$, these angles are _____

Examples of each pair:

Type 2:
Name – **Alternate Interior Angles (AIA)**

When $a \| b$, these angles are _____

Type 3:
Name – **Alternate Exterior Angles (AEA)**

When $a \| b$, these angles are _____

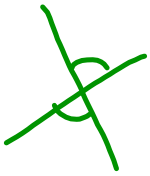
Type 4:
Name – **Same Side Interior Angles (SSIA)**

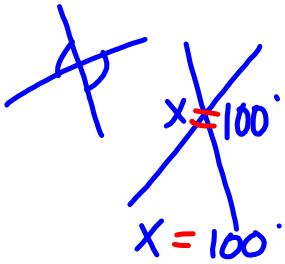
When $a \| b$, these angles are _____

Type 5:
Name – **Vertical Angles (VA)**

These angles are congruent ≅

* always!

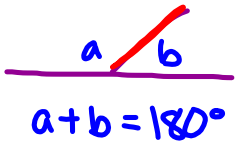


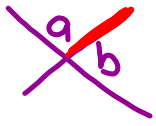


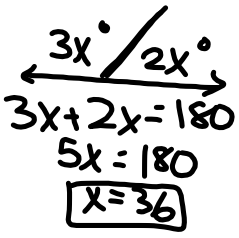
Type 6:
Name – **Linear Pair (LP)** (2)

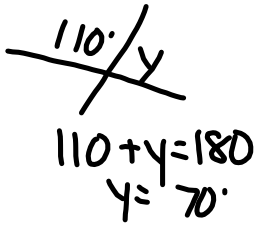
These angles are supplementary (add to 180°)

hint: linear pairs (2 angles) form a straight line + share a side









* linear pairs + vertical ∠s don't prove lines //

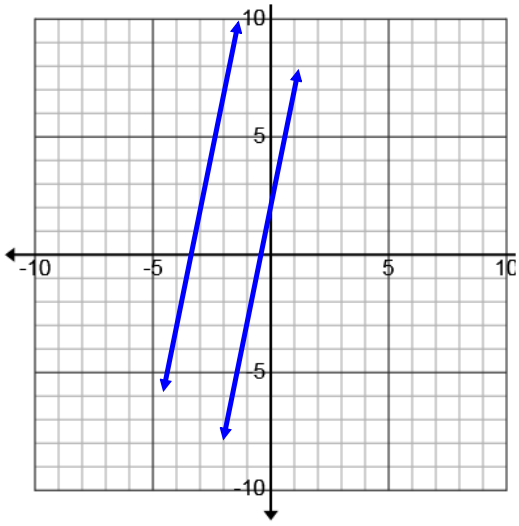
Parallel Lines:

- never intersect
- have the same slope

example slopes you might see for parallel lines:

ex: $\frac{2}{3}, \frac{2}{3}$

$-5, -5$



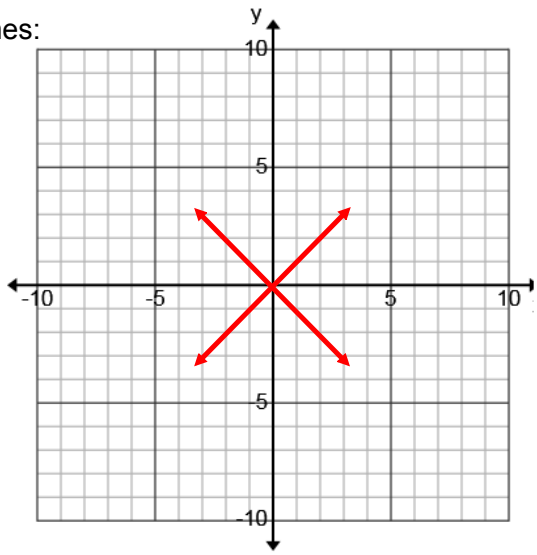
Perpendicular Lines:

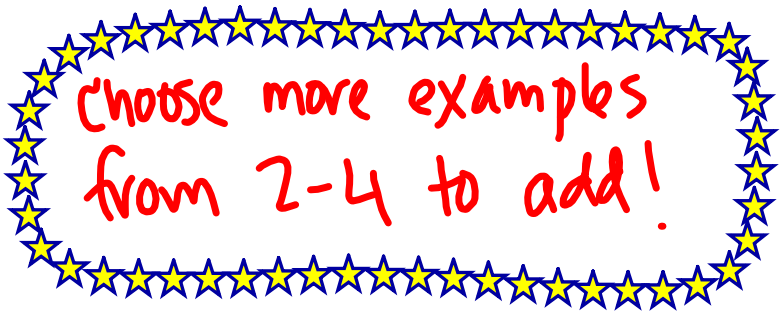
- intersect at a 90 degree/right angle
- have opposite reciprocal slopes

example slopes you might see for perpendicular lines:

ex: $\frac{2}{3}, \frac{-3}{2}$

$-5, \frac{1}{5}$





Steps: for finding equations of lines...

- Find the new slope (*m*)
- Substitute (x,y) and *m* into y = mx + b
- Solve for *b*
- Write the answer in slope-intercept form

Find the slope of each line.

Which lines are parallel? Which lines are perpendicular?

$y = mx + b$

$line\ a: \quad y = -2x + 4$ slope of a: -2

$line\ b: \quad y = 2x + 1$ slope of b: 2

$line\ c: \quad y = \frac{1}{2}x - 3$ slope of c: $\frac{1}{2}$

$line\ d: \quad y = -\frac{1}{2}x + 1$ slope of d: $\frac{-1}{2}$

$a \perp c$. (Line a is perpendicular to c.)

$b \perp d$ (Line b is perpendicular to d because they have opposite reciprocal slopes.)

Plan for Monday (most likely):

1) retest Unit 2 or 2-3/4-2

or

2) mid-tri review mock test
(for everyone else
who is not retesting)