Warmup 2/(# of exclamation points in "CHIEFS WIN!!!")

Created by Mr. Lischwe

Make sure you have a SMALL whiteboard, marker, and eraser inside your desk. No big whiteboards.

Convert each fraction into a decimal. Simplify if possible.

1) 7.37 $7\frac{37}{100}$

2) $0.\overline{4}$ $\frac{4}{9}$

3) $0.\overline{183}$ $\frac{183}{999} \rightarrow \frac{61}{333}$

4) 0.475 $\frac{475}{1000} \rightarrow \frac{95}{200} \rightarrow \frac{19}{40}$

Exponent & Scientific Notation Tests…

- Are graded
- We will go over them TOMORROW (too many people haven't taken it yet)

- **By the way, Exponent QUIZ retake deadline is on Friday!!!**

PLAN FOR THIS WEEK:

- Today: Basics of Angles
- Tuesday: Angles formed by Parallel Lines
- Wednesday: Angles of Triangles
- Thursday: Review
- Friday or Monday: Angles Quiz!!!

Textbook Volume 2!!!

- Keep your volume 1 somewhere handy – we'll go back to it later.

- Anytime I tell you to bring your textbook now, it should be **VOLUME 2.**

Table of Contents (2nd Semester)

Angle Basics

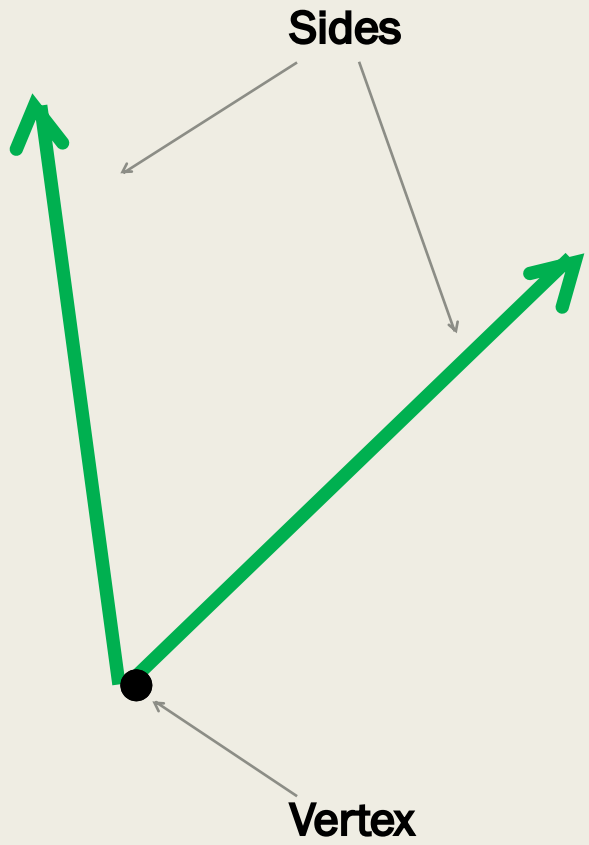
Objectives:

- Name angles
- Estimate angle measures
- Measure angles with a protractor
- Classify angles
- Find complementary and supplementary angles
- Find missing angle measures in an “X”

Brainstorm:

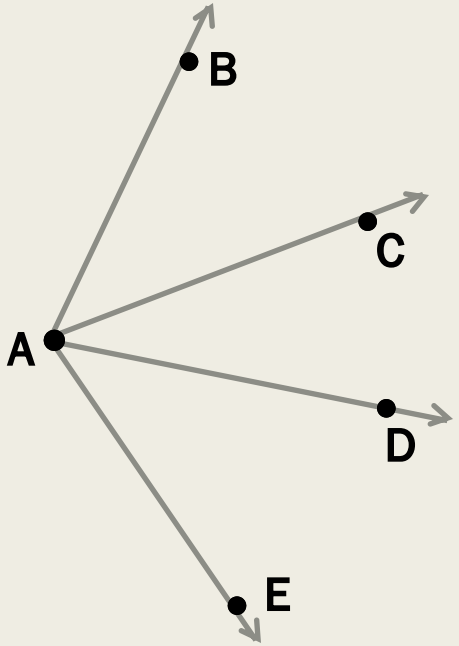
- What do we remember about angles???

Parts of an angle

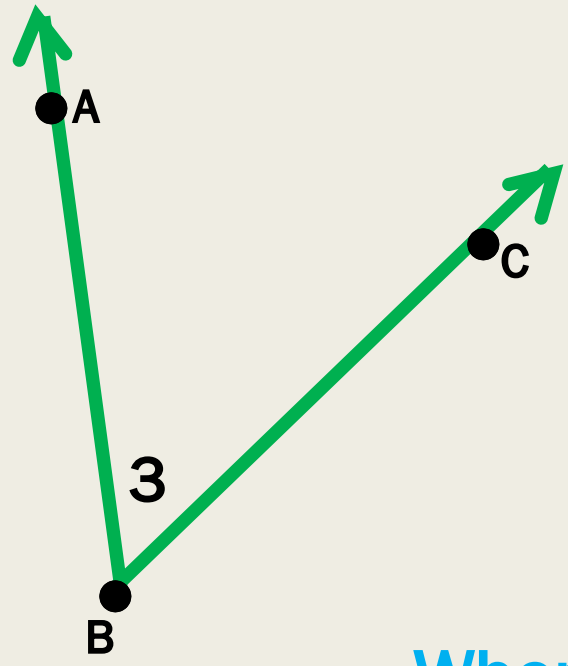


Quick Question…

- How many angles are in this picture?
- How would I **name** each one?



4 ways to name this angle…

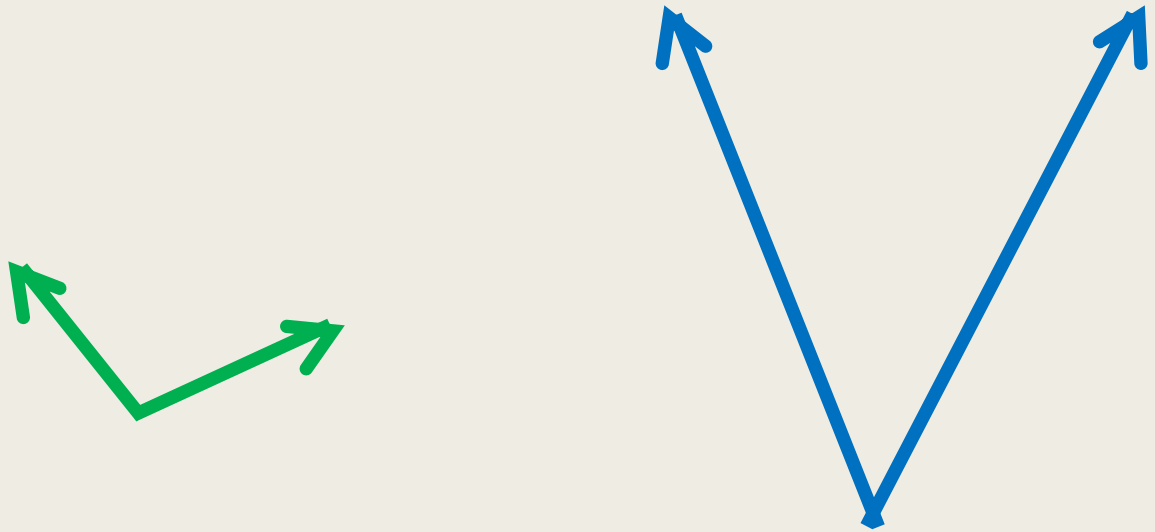


NAMING ANGLES

- Use 3 letters – the middle letter MUST be the vertex
- May use 1 letter ONLY IF there's only one angle at that vertex

When you name an angle, trace the 3 letters in order like a letter "V"!

Which angle is has a greater measure?



4 “Categories” of angles

- **Acute**: between 0 and 90 degrees
- **Right:** exactly 90 degrees
- **Obtuse:** between 90 and 180 degrees
- **Straight:** exactly 180 degrees

- **(If I were you, I would put a picture representing each type too)**

- By the way, an angle over 180 degrees is called a “reflex” angle

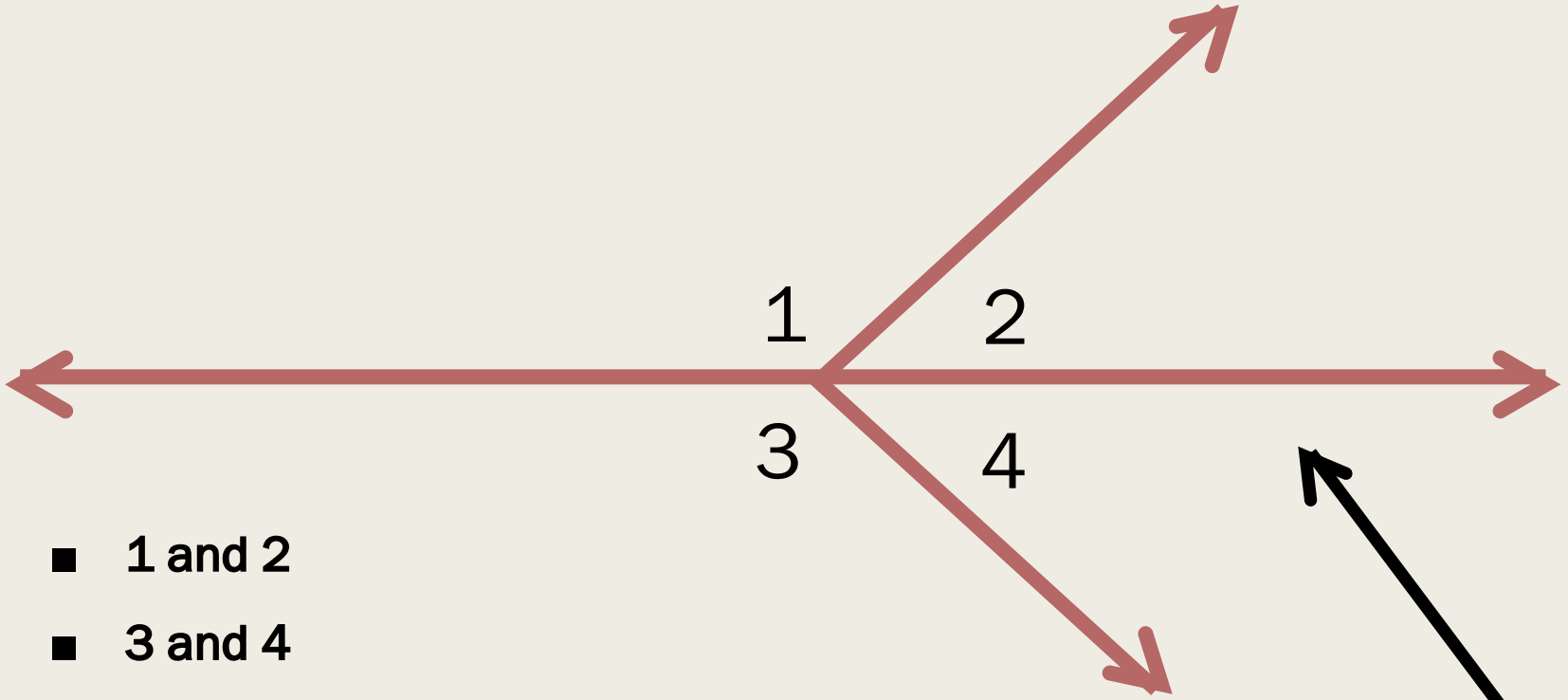
IMPORTANT GEOMETRY VOCAB

- Two angles that have the same measure are called

CONGRUENT.

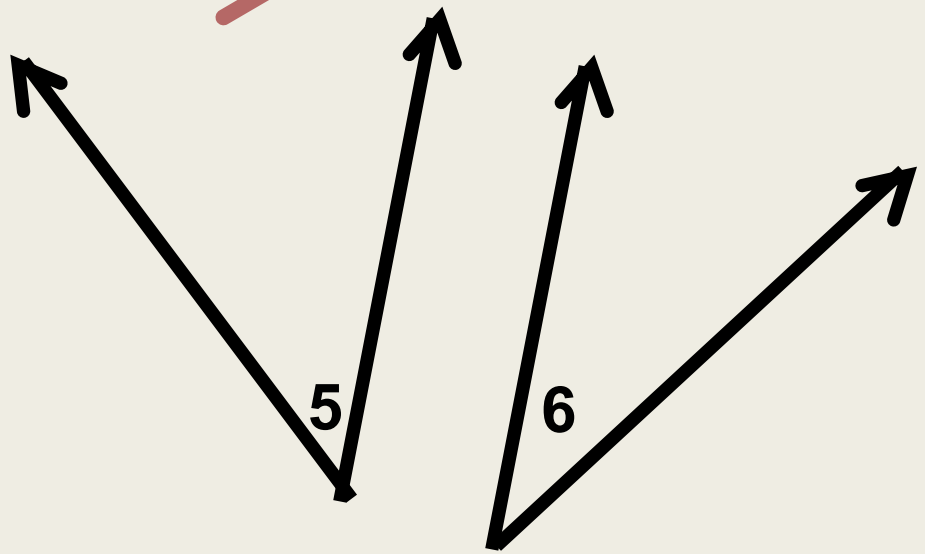
- Symbol: ≅

- **Adjacent Angles**: Share a side and vertex



- 1 and 2
- 3 and 4
- 1 and 3
- 2 and 4

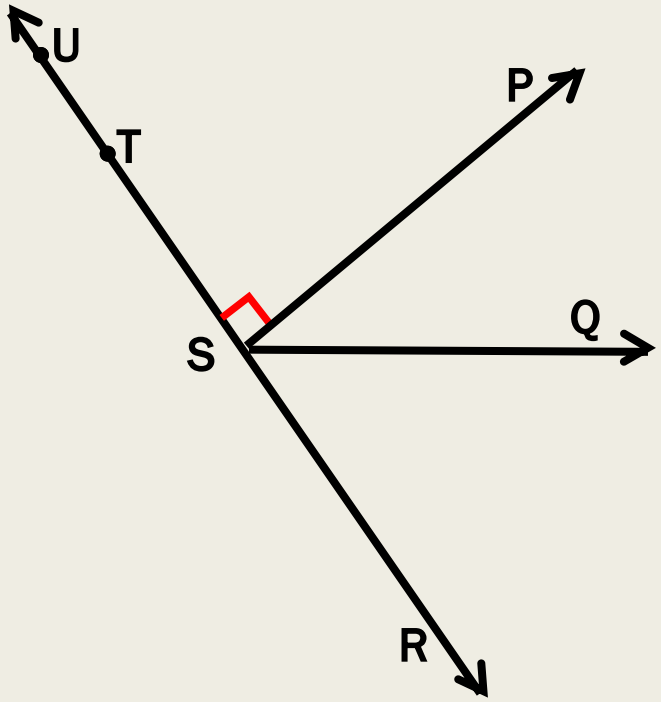
Non-adjacent



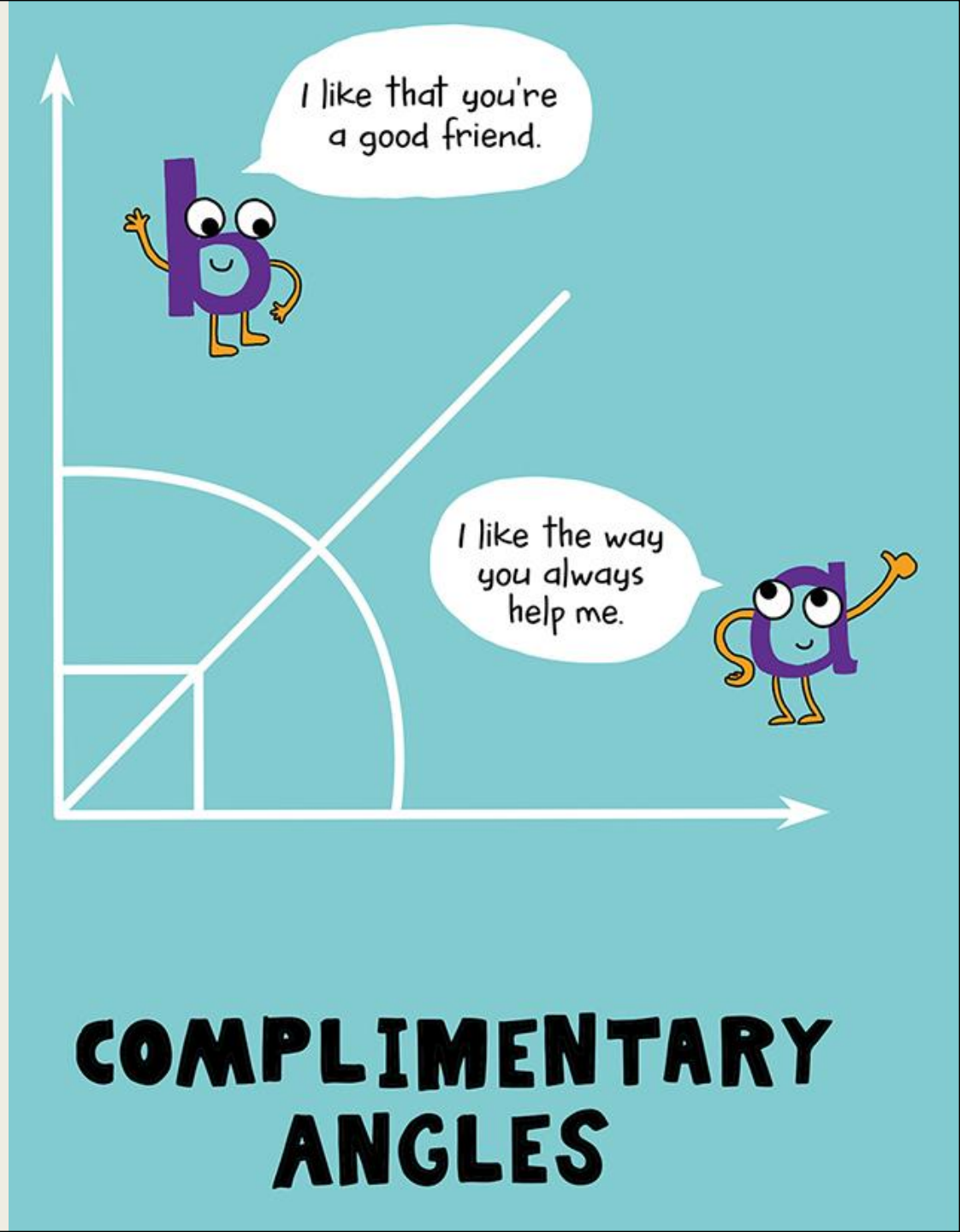
Name an example of each of the following:

- An acute angle ∠PSQ or ∠QSR
- A right angle ∠USP or ∠TSP or ∠PSR
- An obtuse angle ∠USQ or ∠TSQ
- A pair of adjacent angles

  Example: ∠USP and ∠PSQ



Complementary Angles

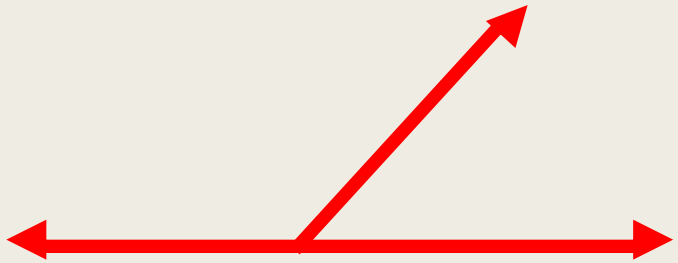


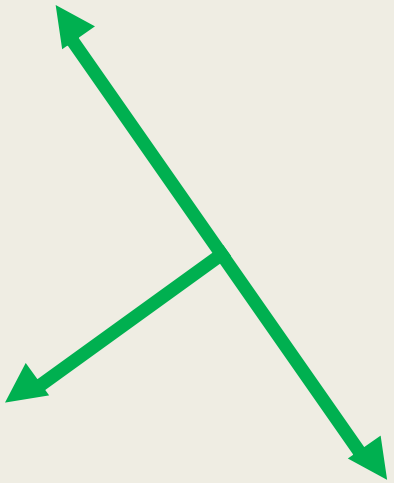
- Complementary Angles are two angles whose measures add up to 90^{o}.
- Supplementary Angles are two angles whose measures add up to 180^{o}.
- (They don't have to be adjacent!!!)

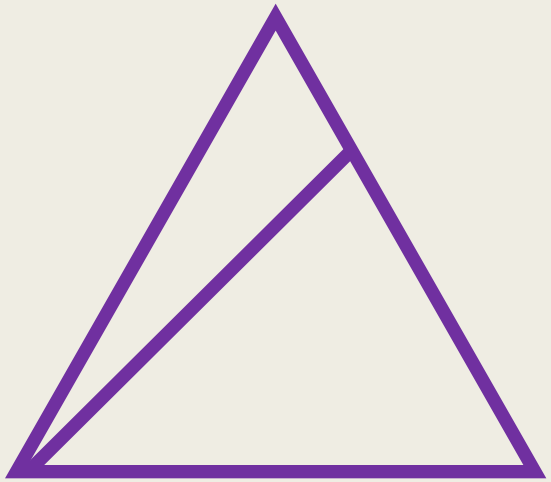
- What is the **complement** of a 50º angle? 40°
- What is the **supplement** of a 50º angle? 130°
- What is the **complement** of a 27º angle? 63°
- What is the **supplement** of a 102º angle? 78°
- What is the **supplement** of a 155.5º angle? 24.5°
- What is the **complement** of a 45º angle? 45°
- What is the **complement** of a 95º angle? None

Linear Pair

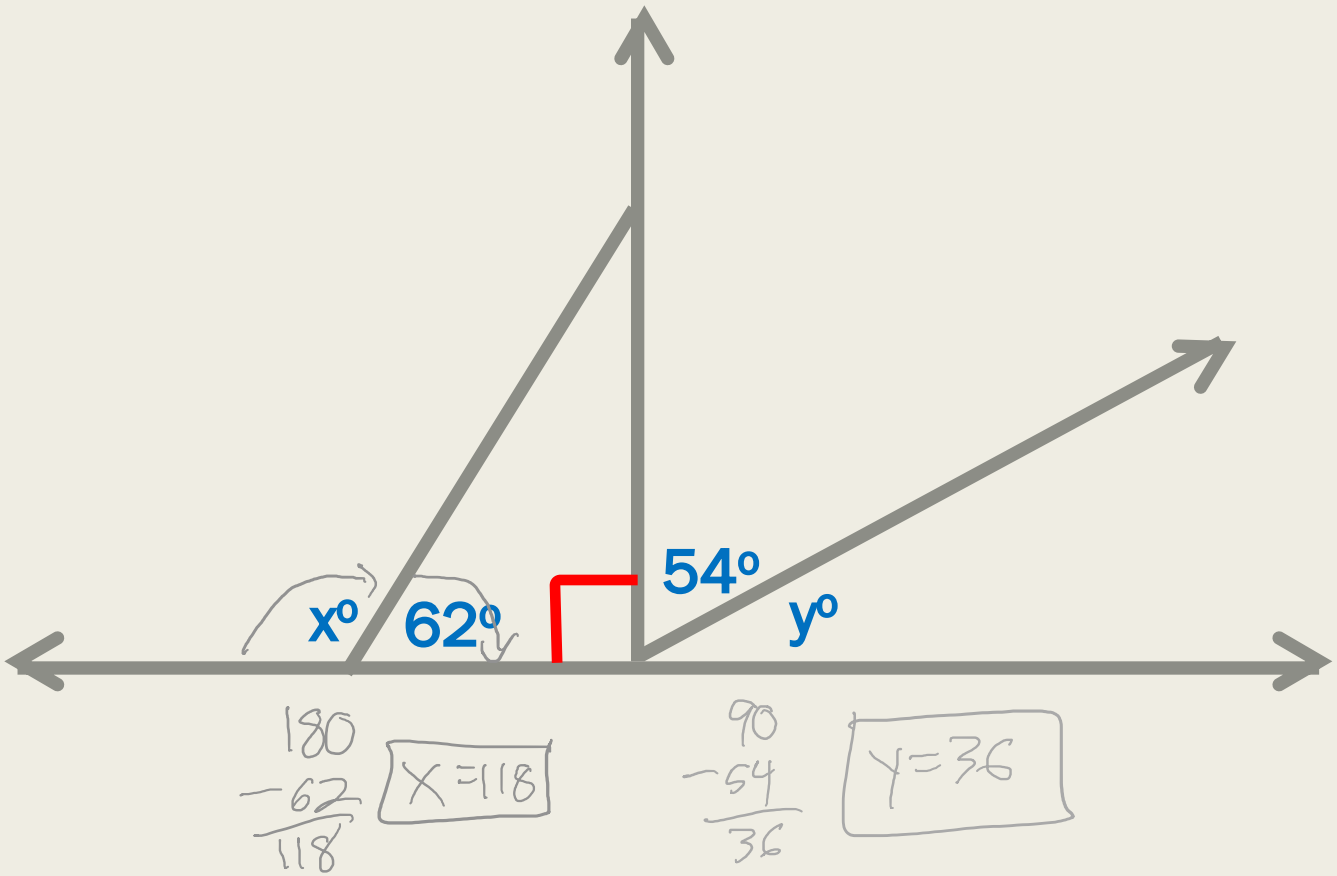
- A **linear pair** is when a straight line is divided into two angles on one side.
- The angles in a linear pair are always supplementary.



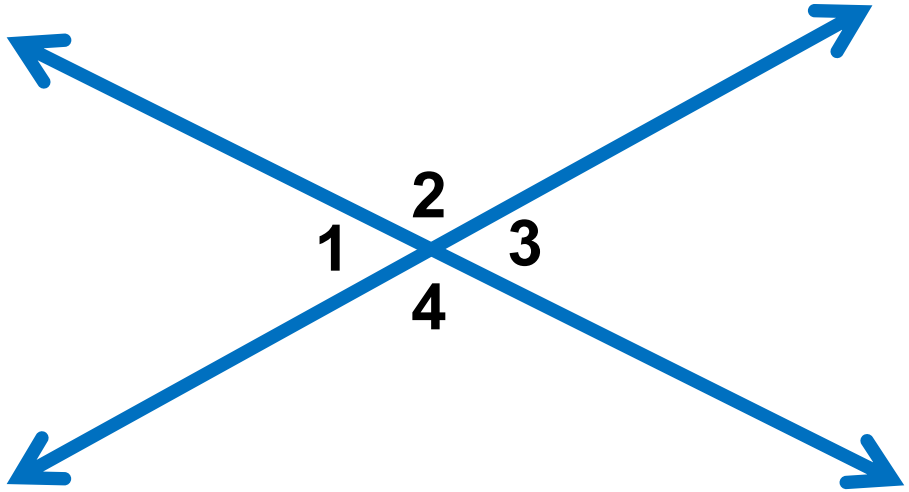




Find the missing angle measures:



- **<u>Vertical Angles</u>**: Angles across from each other at the intersection of two straight lines.
  - They are **always** congruent!!!

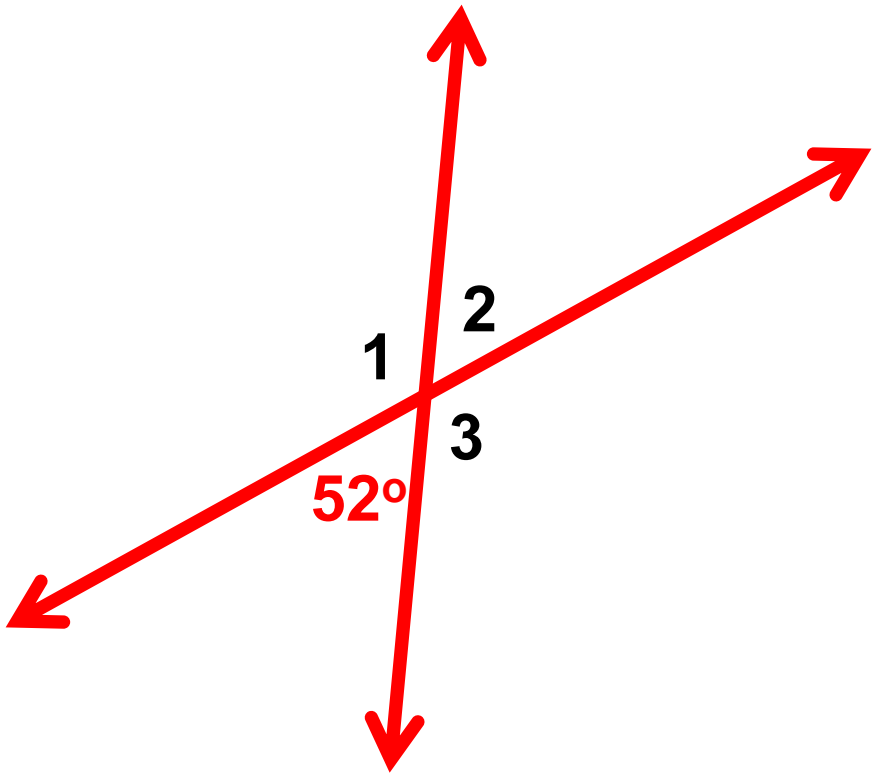


- $\angle 1 \cong \angle 3$ and $\angle 2 \cong \angle 4$

Example

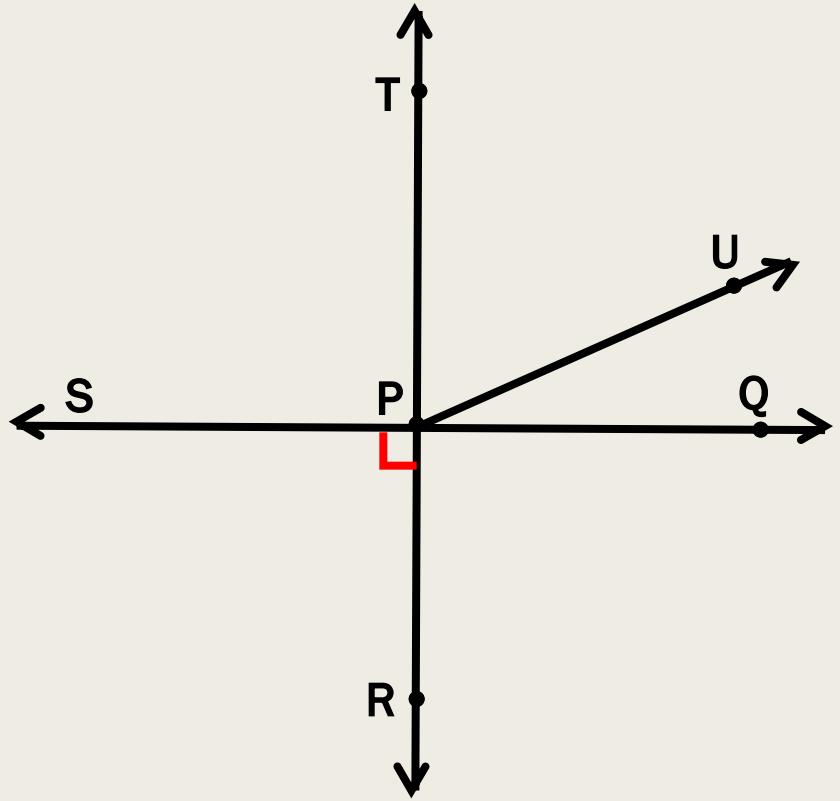
- **Find the other three angle measures.**

$m\angle 1 =$ 128°
$m\angle 2 =$ 52°
$m\angle 3 =$ 128°



Name an example of each of the following:

- A pair of complementary angles
- A linear pair
- A pair of vertical angles



HOMEWORK

- Angle Basics Worksheet (Sections 1 & 2)