Lesson 0.4: Angle Classifications

Targets:

1. I can write my own definition for the following words with no counterexamples.

"Counterexample"

Look on page 47 of the Discovering Geometry book and write a definition for "counterexample."
(all the pages for this lesson are in a PDF on my website)

How do counterexamples help us write a precise definition for a term?

Writing Good Definitions

"A square is a figure with four equal sides."

a. What's wrong with this definition?

b. Sketch a counterexample. (You can probably find more than one!)

c. Write a better definition for a square.

Beginning Steps to Creating a Good Definition

1. **Classify** your term. What is it?
2. **Differentiate** your term. How does it differ from others in that class?
3. **Test** your definition by looking for a counterexample.

Example B: page 48

Look on page 48 and copy the definitions for parallel lines and perpendicular lines. Pay close attention to how they follow the steps from above for a good definition.

- **Parallel Lines**
  - Definition:
  - Example:
- **Perpendicular Lines**
  - Definition:
  - Example

Definitions (on your own)

Write a good definition for each term using the steps given from this lesson (classify, differentiate, test). Include examples for each term.

- Right Angle
    - Definition:
    - Example:
- Acute Angle
    - Definition:
    - Example:
- Obtuse Angle
    - Definition:
    - Example:
- Vertical Angles
    - Definition:
    - Example:
- Linear Pair of Angles
    - Definition:
    - Example:
- Complimentary Angles
    - Definition:
    - Example:
- Supplementary Angles
    - Definition:
    - Example:

Double Check

Double check your definitions and examples with mine. A PDF of my notes is attached on my website.

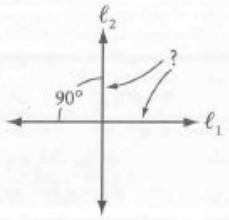
Exit Ticket

In this lesson you learned quite a few new terms. Make sure you know these terms by finishing the matching assignment below. Be warned, some of them might seem like they fit more than one option, so pick the BEST option.

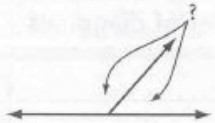
When you think you have it, raise your hand to show me. A high five is on its way :)

For Exercises 1–12, match each term with one of the items (a to l) below.

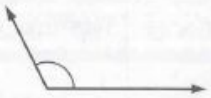
a.



b.

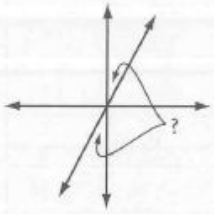


c.

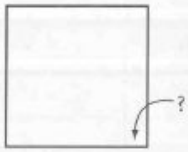


d. $m\angle P = 68°$
$m\angle XYZ = 114°$
$m\angle Y = 112°$
$m\angle STP = 58°$

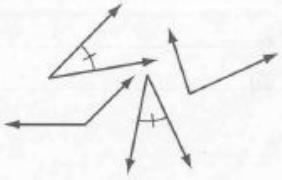
e.



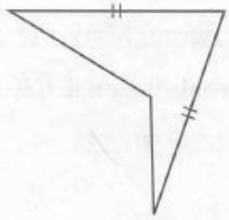
f.



g.

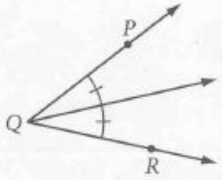


h.

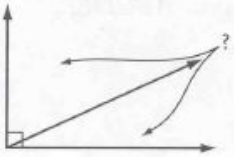


i. $m\angle A = 87°$
$m\angle X = 96°$
$m\angle Y = 90°$

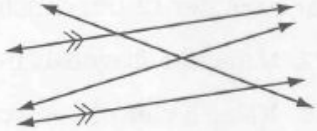
j.



k.



l.



1. _____ Pair of vertical angles
2. _____ Pair of supplementary angles
3. _____ Right angle
4. _____ Obtuse angle
5. _____ Pair of congruent angles
6. _____ Pair of complementary angles
7. _____ Linear pair of angles
8. _____ Acute angle
9. _____ Bisected angle
10. _____ Parallel lines
11. _____ Congruent segments
12. _____ Perpendicular lines