Unit 5

5.3 + 5.4 Lines + Transversals

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Preamble

Objective

Understand terminology and practice when dealing with transversals

Definitions

- **vertically opposite angles**: two lines that meet at one point create opposite angles that are the same
- **transversal**: A line that runs into more then one other line
- **corresponding angles**: angles that have similar corresponding places
- **alternate interior angles**: see picture
- **alternate exterior angles**: see picture

Start

Intro

When lines cross each other, angles are formed. Now depending on where the lines are going, we can have some types of angles that seem to make their appearances rather often in math and science. We have those definitions above.

[Draw two lines]

Q: What would we call angle right next to each other?

Q: What about angles on the other side.

Recall what vertical means. You may be tempted to think of straight up and down, but the roots of word actually go back to the root word vertex, which is exactly what these two angles are sharing

Now things are going to get a little crazy here, so just hold onto your hats.

When we have two lines (close to being parrallel) that are closed with another line, we create 8 different angles.

Now in math we have special names for the relationship between the angles created at the top intersection, and the bottom intersection.

If they angles are the same side, and are in the same relative position, we call that corresponding angles. If they are both in the same box, we call that consecutive interior angles.

Now if the angles we are comparing are on the other side of the line, we call that alternate. And just like before, if they are in the box, or outside of the box, determines if they are exterior or interior.

> Q: Which one would you call an alternate interior angle? alternate exterior angle?

http://www.mathsisfun.com/geometry/alternate-interior-angles.html

and do question 1 and 2

But things change when the lines we are dealing with become parallel.

[Wok with geogebra to come to some conclusions about each of the angles you saw before: Work with multiple lines so that you come to an intuitive understanding of all parallel lines]

> Q: Using this information, can we then determine if two lines are parallel or not?

Example 1

2 - pg. 203

Example 2

2 - pg. 213

End

Assignment

pg. 204: 4 pg. 216: 6,8

Activity

pg. 211

Puzzle it out

pg. 218