

Geometry: Tuesday, October 14<sup>th</sup> Bell Work - Choose 2 categories.

<p><u>Skill: Simplify</u></p> <p>1. <math>\frac{2}{5} + 3</math></p> <p>2. <math>\frac{1}{8}(3)</math></p> <p>3. <math>\frac{4}{7} - 2</math></p>	<p><u>Concept:</u> Given the sets of equations below, determine whether the lines are parallel, perpendicular, or oblique.</p> <p>1. <math>\begin{cases} y = 2x - 6 \\ y = 2x - 7 \end{cases}</math></p> <p>2. <math>\begin{cases} y = \frac{3}{2}x - 8 \\ y = -\frac{2}{3}x - 1 \end{cases}</math></p> <p>3. <math>\begin{cases} y - 3x = -6 \\ y - 3x = 7 \end{cases}</math></p>
<p><u>Extension:</u></p> <p>1. Given the equation <math>y = 3x - 4</math>, write the equation of a line that is PARALLEL to it and goes through the point (3, -5).</p>	

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<p><u>Skill: Simplify</u></p> <p>1. <math>\frac{2}{5} + 3 = \frac{17}{5}</math></p> <p>2. <math>\frac{1}{8}(3) = \frac{3}{8}</math></p> <p>3. <math>\frac{4}{7} - 2 = \frac{-10}{7}</math></p>	<p><u>Concept:</u> Given the sets of equations below, determine whether the lines are parallel, perpendicular, or oblique.</p> <p>1. <math>\begin{cases} y = 2x - 6 \\ y = 2x - 7 \end{cases}</math> parallel</p> <p>2. <math>\begin{cases} y = \frac{3}{2}x - 8 \\ y = -\frac{2}{3}x - 1 \end{cases}</math> perpendicular</p> <p>3. <math>\begin{cases} y - 3x = -6 \\ y - 3x = 7 \end{cases}</math> parallel</p>
<p><u>Extension:</u></p> <p>1. Given the equation <math>y = 3x - 4</math>, write the equation of a line that is PARALLEL to it and goes through the point (3, -5). <math>y + 5 = 3(x - 3)</math></p>	

## Agenda

1. Turn in "Writing Equations HW"
2. Pick up "T.O.T.D." from yesterday. Look at comments.
3. Slope sort - Elbow Partners
4. Equation sort - Individuals
5. Guided practice
6. T.O.T.D

Have out  
Monday's notes

## Slope sort

### How are we working?

Partners

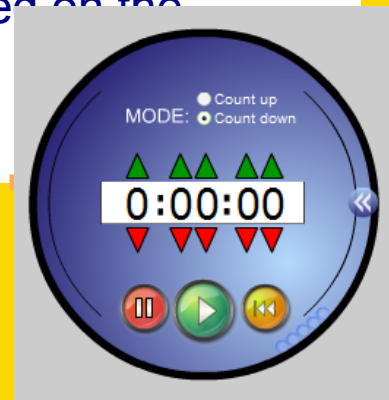
### What does this look like?

- Whisper volume.
- Take turns. Each partner gets a chance to speak.
- Make eye-contact

## Slope sort

### Directions

1. Look at the slopes given on each card.
2. Discuss with your partner whether the relationship shows parallel, perpendicular, or oblique lines.
3. Sort your cards into 3 stacks based on the relationship.



### Slope sort - Answers

#### Parallel

1, 3, 10

#### Perpendicular

6, 7, 8, 9

#### Oblique

2, 4, 5,

## Equations Sort

### How are we working?

Individually

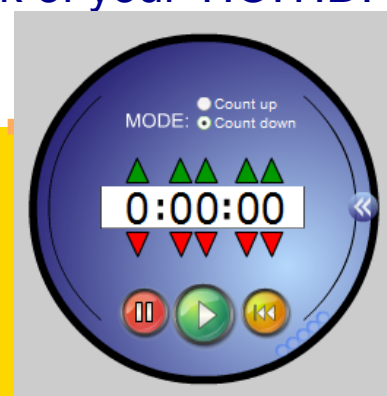
### What does this look like?

- Silent
- Stay on task
- Raise your hand for help

## Equations sort

### Directions

1. Decide whether this relationship between the two given equations shows parallel, perpendicular, or oblique lines.
2. Record your answers on the back of your T.O.T.D. from Monday.



## Equations sort - Answers

Parallel  
1, 3, 10

Perpendicular  
2, 4, 6, 8,  
13, 15, 20

Oblique  
5, 7, 9,  
11, 12,  
14, 16,  
17, 18, 19

~~$y = 8x + 3$~~   
point (2, 4)

Parallel

$$m = 8 \quad (2, 4)$$

$$y - 4 = 8(x - 2)$$

$$y - 4 = 8x - 16$$

$$y = 8x - 12$$

~~$y = 8x + 4$~~

Perpendicular

$$m = -\frac{1}{8} \quad (2, 4)$$

$$y - 4 = -\frac{1}{8}(x - 2)$$

$$y - 4 = -\frac{1}{8}x + \frac{1}{4}$$

$$y = -\frac{1}{8}x + \frac{1}{4} + 4$$

$$y = -\frac{1}{8}x + \frac{1}{4} + \frac{16}{4}$$

$$y = -\frac{1}{8}x + \frac{17}{4}$$

$$y = -2x + 3$$

point (3, 9)

Parallel

$$m = -2 \quad (3, 9)$$

$$y - 9 = -2(x - 3)$$

$$y - 9 = -2x + 6$$

$$\boxed{y = -2x + 15}$$

Perpendicular

$$m = \frac{1}{2} \quad (3, 9)$$

$$y - 9 = \frac{1}{2}(x - 3)$$

$$y - 9 = \frac{1}{2}x - \frac{3}{2}$$

$$y = \frac{1}{2}x - \frac{3}{2} + \frac{18}{2}$$

$$\boxed{y = \frac{1}{2}x + \frac{15}{2}}$$

$$y = 3x - 1$$

point (-9, 2)

Parallel

$$m = 3 \quad (-9, 2)$$

$$y - 2 = 3(x + 9)$$

$$y - 2 = 3x + 27$$

$$\boxed{y = 3x + 29}$$

Perpendicular

$$m = -\frac{1}{3} \quad (-9, 2)$$

$$y - 2 = -\frac{1}{3}(x + 9)$$

$$y - 2 = -\frac{1}{3}x - 3$$

$$\boxed{y = -\frac{1}{3}x - 1}$$

## Ticket Out the Door

### Complete on your own

- You may use your notes from yesterday and today.
- Complete the reflection at the bottom.

\*LT = identifying parallel, perpendicular, or oblique lines; writing parallel and perpendicular equations.