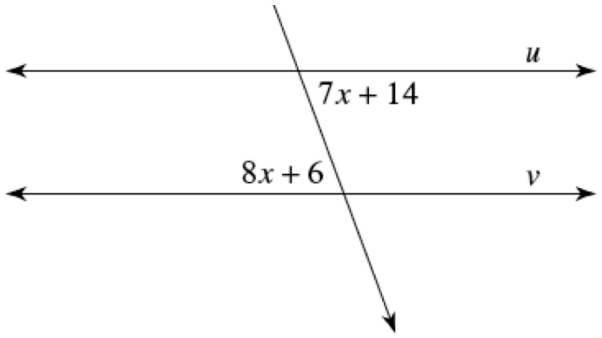
10/4 Do Now

DO NOW Name_____ Date_____ Per_____

(1) Copy the diagram.

(2) What value of x would make line u parallel to line v? Justify by explaining how you know.



SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Announcements

1. You need a compass EVERY day in this class incase we do constructions. You MUST have a compass to complete the homework. You MUST have a compass by Wednesday.
2. Group test Friday

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Assignment sheet

Class _____ Period _____

DATE	CLASSWORK ASSIGNMENT	HOMEWORK ASSIGNMENT
10/1	Unit 1 Reflection due 10/2	Unit 1 Reflection due 10/2
10/2	Proving Lines Parallel due 10/2	Proving Lines Parallel due 10/3
10/3	Constructing Parallel Lines due 10/3	Constructing Parallel Lines due 10/4
10/4	Parallel Lines on a Coordinate grid due 10/4	Parallel Lines on a Coordinate grid due 10/5
10/5	Group Test Parallel Lines due 10/5	Parallel Lines Review due 10/8

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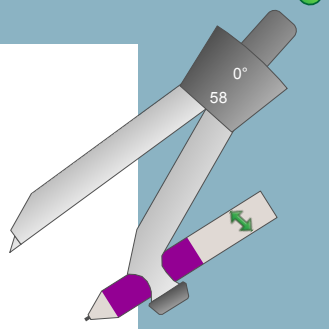
G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 HW Check

HOMEWORK: Constructing Parallel Lines with a compass and straightedge

1) Construct a line parallel to each line below:

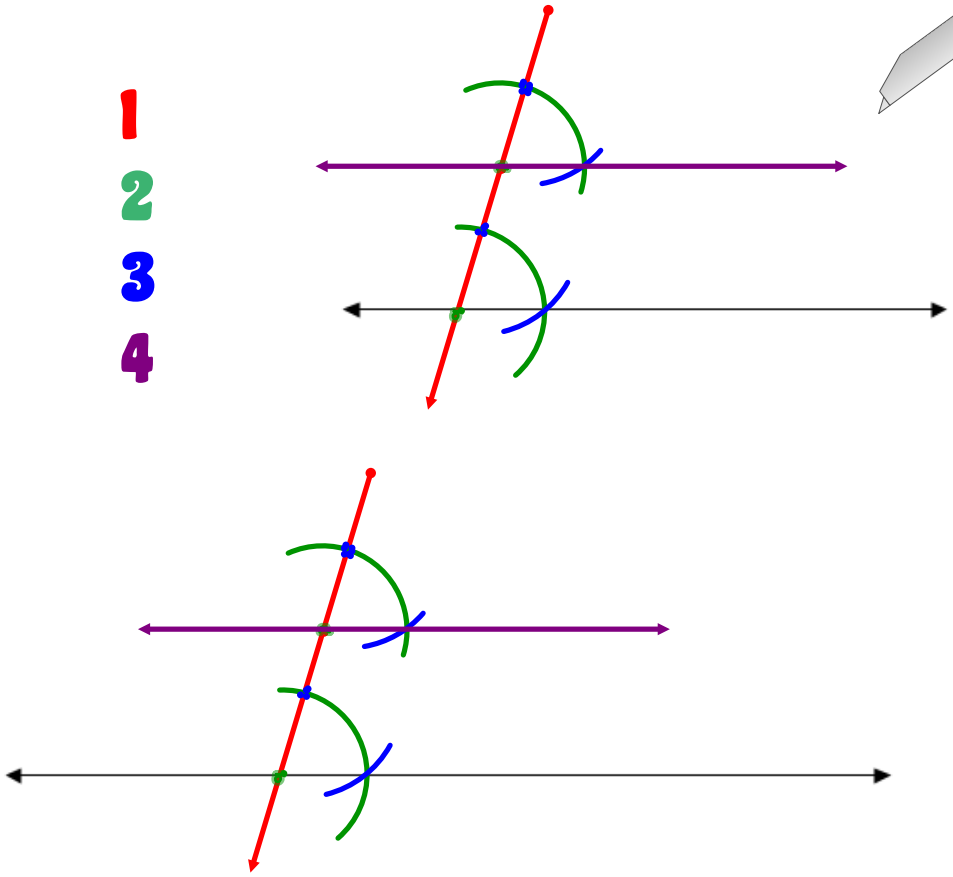


1

2

3

4



2) Describe WHAT we are doing to construct a parallel line and WHY it works.

Copy a corresponding angle along a transversal because if corresponding angles are congruent, then lines are parallel

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

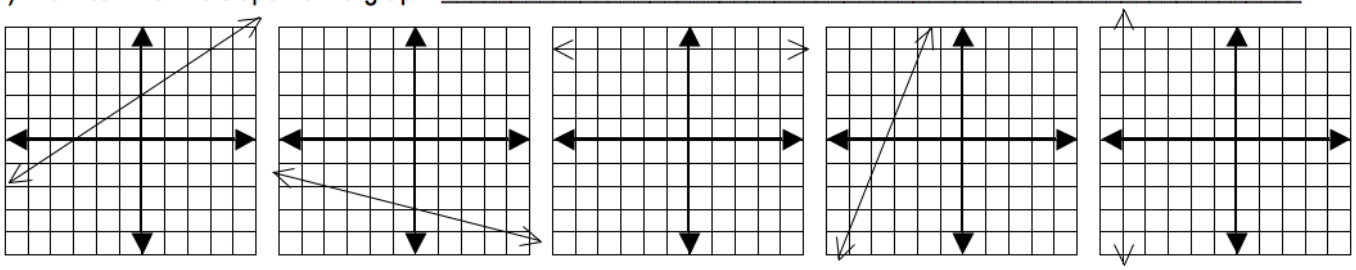
G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

CLASSWORK: Parallel Lines on a Coordinate Grid.

1) What does slope tell us about a line?_____

2) How can we find slope from a graph?_____



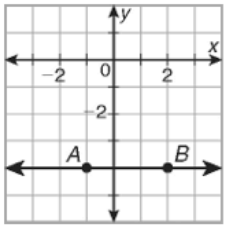
Slope =_____ Slope = _____ Slope =_____ Slope = _____ Slope =_____

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

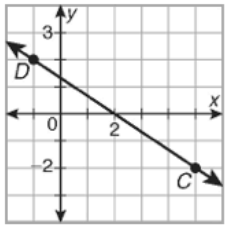
G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

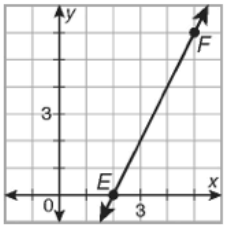
Determine the slope of each line.



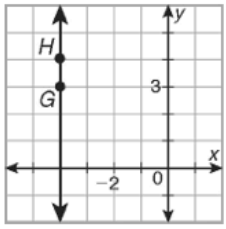
1. $\overleftrightarrow{AB}$ _____



2. $\overleftrightarrow{CD}$ _____



3. $\overleftrightarrow{EF}$ _____



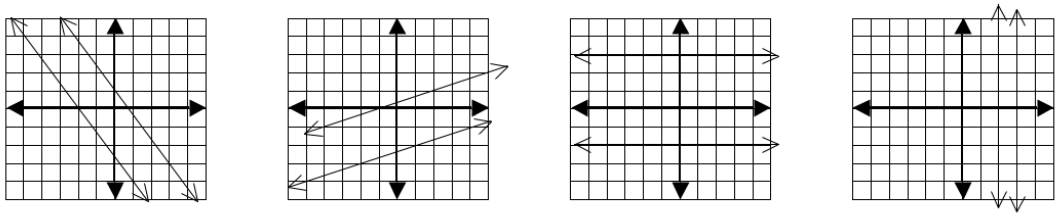
4. $\overleftrightarrow{GH}$ _____

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

3) The lines on the graphs below are parallel. What do you notice about the slope? Why does that happen?



SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

CLASSWORK: Parallel Lines on a Coordinate Grid.

4) How can you find the slope of a line if you know two points but don't have a coordinate grid?

a. A(-3,5) B(-7,11)	b. C(-3,2) D(-3,9)	c. E(7,1) F(-14,1)	d. G(8, 4) H(10,12)
slope_____	slope_____	slope _____	slope_____

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

5) How can you determine whether or not two lines are parallel from points on the lines if you don't have a coordinate grid?

a. line JK, J(3,4) K(7,9)
line LM, L(-29, -26) M(-9,-1)

b, line NP, N(-42, 17), P(6,1)
line QR, Q(15,10), R(33,1)

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

5) Where does slope show up in an equation?

Type these equations into your graphing calculator 1 at a time and use the table of points to graph them. Find the slope from the graph and see where it shows up in the equation. Label each line with its equation and slope.

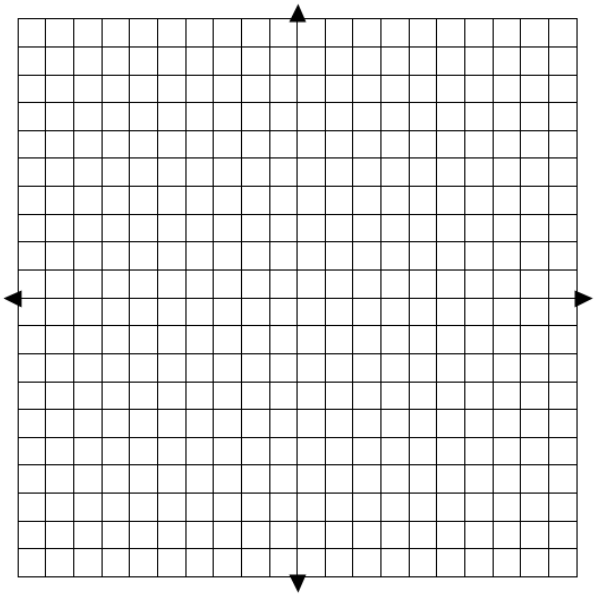
y = -2x + 3 slope____

y = ¼ x – 5 slope____

y = 3x – 1 slope____

y = 7 slope____

x = -8 slope____



6) Besides slope, what other information do we get from a linear equation in y-form?

7) Write the y-intercept in coordinate form (___,___) next to the slope for each equation above

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

8) How can I determine whether or not lines are parallel given their equations in y-form?

Are the pairs of lines below parallel?

a) $y = 4x - 11$ and $y = 4x + 2$ are/are not parallel because_____

b) $y = -\frac{1}{2}x - 6$ and $y = -2x + 3$ are/are not parallel because_____

c) $y = \frac{3}{4}x + 1$ and $y = \frac{3}{4}x$ are/are not parallel because_____

d) $y = 2x - 3$ and $3y = 6x + 3$ are/are not parallel because_____

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

9) What can I do if an equation isn't in y-form?

a) $3x - 9y = 63$

b) $2(x - 4) = y + 7$

c) $-2(6x + 1) - y = 14$

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

10) How can I find the y-form of an equation of a line if I know the slope and a point?

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

11) How can I find the y-form of an equation of a line if I know two points on the line?

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

12) Are there any times when 2 lines would have the same slope, but are not parallel?

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Proving Lines Parallel: graphs & equations

PARALLEL SUMMARY: Describe what we know about parallel lines so far. Include information about angle relationships, construction, graphs, and equations. Make connections between these

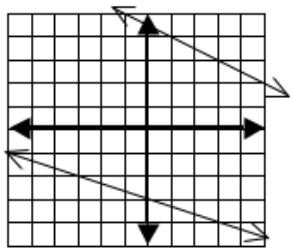
SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

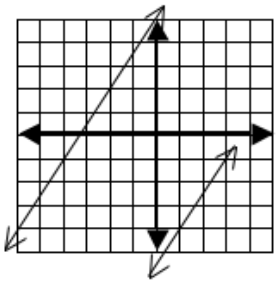
10/4 Proving Lines Parallel: graphs & equations

HOMEWORK: Parallel Lines on a Coordinate Grid.

1) Determine whether the lines are parallel. Justify your answer with a written explanation.



2) Determine whether the lines are parallel. Justify your answer with a written explanation.



3) Determine whether the lines are parallel. Justify your answer with a written explanation.

$y = 3x - 9$

$y = -3x - 2$

4) Determine whether the lines are parallel. Justify your answer with a written explanation.
Line AB with points A(6,2) and B(3, -4) and line C with points (9,12) and (6, 18)

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

10/4 Geometry PRIDE

Names & accomplishments

10/4 Ticket Out the Door

Ticket out the door Name_____ Date_____ Per_____

☹ 1 2 3 4 5 ☺ because:

Rate how well you met today's SLO (Student Learning Objective). Describe how to construct a parallel line and justify that it works.

SLO: Justify that lines are parallel by comparing slopes on graphs or from equations.

G.G.63 Determine whether two lines are parallel, perpendicular, or neither, given their equations.

9/17 Quiz

Face desks forward and clear desk except for

Communication of any sort = ZERO

RAISE YOUR HAND silently if you need something

CCSS Standard:

9/17

Test

Face desks forward and clear desk except for

Communication of any sort = ZERO

RAISE YOUR HAND silently if you need something

CCSS Standard: