

# All About Lines

Slopes

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EGRIS



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Slopes for 100.

Find slope of  $y = 3x - 1$

-1

1/3

$x$

3

1



Slopes for 200.

Find slope of  $x = 3$

3

0

1

undefined

$y$



Slopes for 300.

Find slope of  $2x + y = 12$

1

12

2

-2

-1



Slopes for 400.

Find slope of line passing through (3, 1) and (-2, 4)

$$-3/ - 5$$

$$-5/3$$

$$-3/5$$

$$-3$$

$$3$$



Orientation for 100.

The lines  $x = 5$  and  $y = 3$  are

parallel

neither

perpendicular



## Orientation for 200.

The lines  $y = 2x + 1$  and  $y = -2x - 3$  are

parallel

perpendicular

neither



## Orientation for 300.

The lines  $y = 3x - 4$  and  $y = 3x + 1$  are

neither

perpendicular

parallel





Orientation for 400.

The lines  $x - 2y = -2$  and  $2x + y = -3$  are

parallel

neither

perpendicular



## Standard Form for 100.

Write  $y = -4x + 2$  in standard form

$$4x - y = 2$$

$$4x + y = 2$$

$$f(x) = -4x + 2$$

$$4x + 2 = y$$



## Standard Form for 200.

Write  $y = 1/3x - 5$  in standard form

$$1/3x + y = 5$$

$$x - 3y = 15$$

$$-x + 3y = -15$$

$$x - 3y = 5$$



## Standard Form for 300.

Write equation of line passing through (2,4) and (6, 8) in standard form

$$y - 4 = 1(x - 2)$$

$$y = x + 2$$

$$x - y = -2$$

$$y = x + 2$$



## Standard Form for 400.

Write equation of line passing through (0,3) and (5,3)  
in standard form

$$x = 3$$

$$y = 3$$

$$x + y = 3$$

$$x - y = 3$$



## Slope-Intercept for 100.

Find the equation of a line, in slope-intercept form,  
given  $m = 2$  and  $b = 6$

$$y = 6x + 2$$

$$y = 2x - 6$$

$$y = 2x + 6$$

$$-2x + y = 6$$

$$2x - y = -6$$



Slope-Intercept for 200.

Find the equation of a line with slope  $m = 3$  and passing through the point  $(1,5)$

$$y - 5 = 3(x - 1)$$

$$y = 3x - 8$$

$$y = 3x + 8$$

$$y = 3x + 2$$

$$-3x + y = 2$$



Slope-Intercept for 300.

Find the equation of a line passing through the points (3,-1) and (4, -4)

$$y = -3x + 8$$

$$y = 3x + 8$$

$$y = 3x - 16$$

$$y + 4 = -3x + 12$$

$$y = -3x + 12$$





Slope-Intercept for 400.

Find the equation of a line passing through the points  
(7, 2) and (7, -3)

$$y = 7$$

$$y = 0x + 7$$

$$y = -5x + 3$$

$$x = 0$$

$$x = 7$$



## Stupid Questions for 100.

What is the variable used to identify slope?

$f$

$s$

$p$

$m$

$x$



## Stupid Questions for 200.

All vertical lines have what type of slope?

positive

negative

zero

undefined



## Stupid Questions for 300.

Rene Descartes is responsible for?

Creating math

coining the term "algebra"

creating the first math book

integrating algebra and geometry



## Stupid Questions for 400.

The point  $(0,0)$  is also called?

the  $x$ -axis

the  $y$ -axis

the origin

nothing