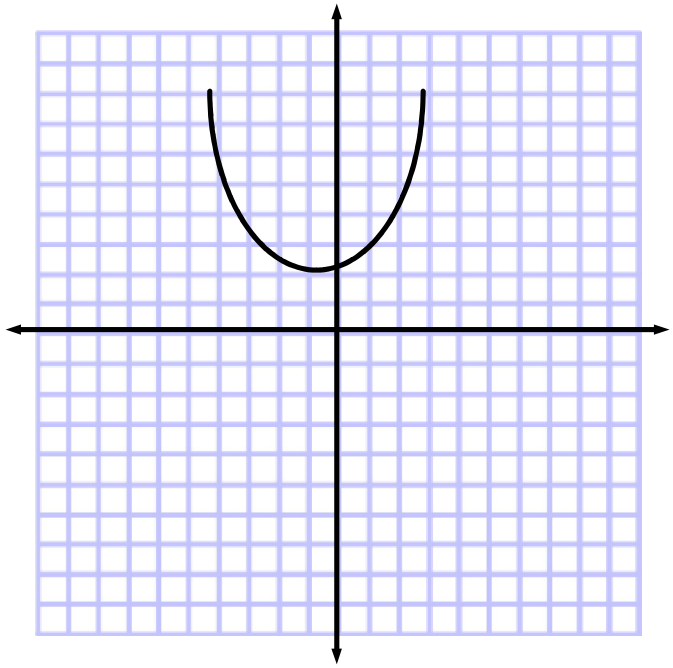
I can : Solve and graph linear functions

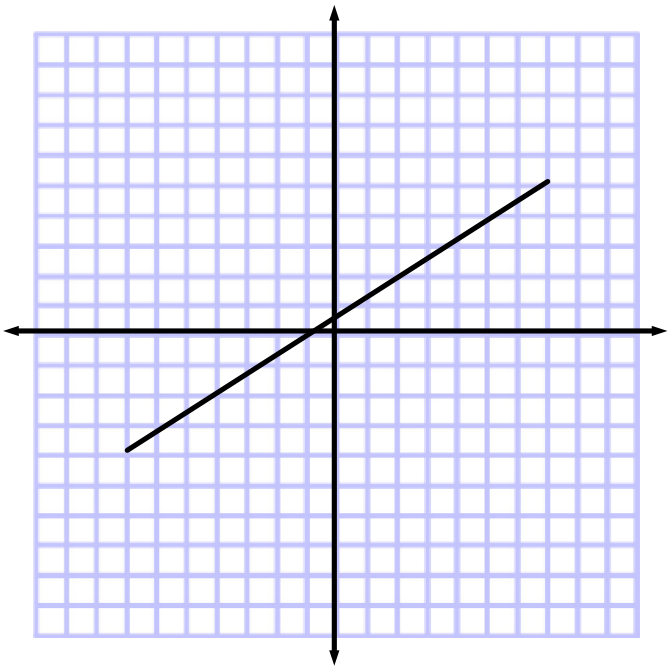
2.3 2.4

Sep 5-12:48 PM

show the YouTube video on domain and range

Feb 5-3:53 PM





find the domain and

range of both graphs

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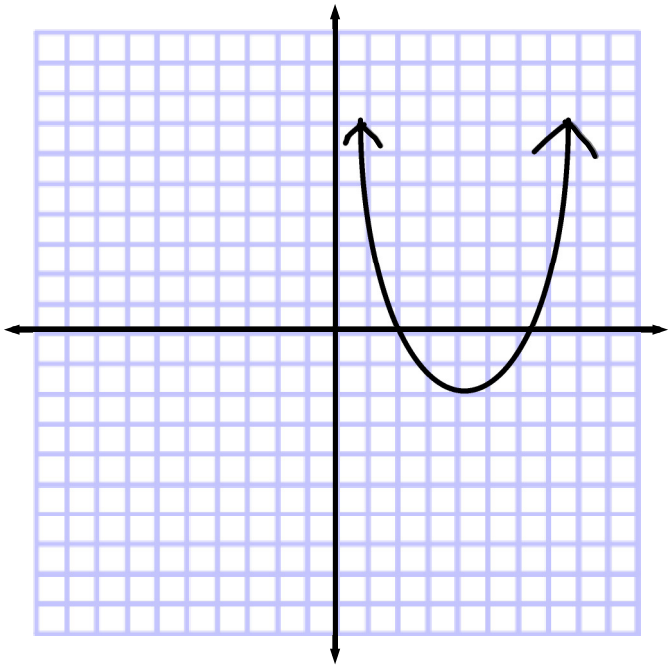

Find the domain and range

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Slope Intercep Form: $y = mx + b$

Standard Form: $Ax + By = C$

Slope: Rise/Run $$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Parallel lines have EQUAL slopes

Perpendicular lines have slopes that MULTIPLTY to equal -1

Sep 5-12:51 PM

$$f(x) = mx + b$$

$$y = mx + b$$

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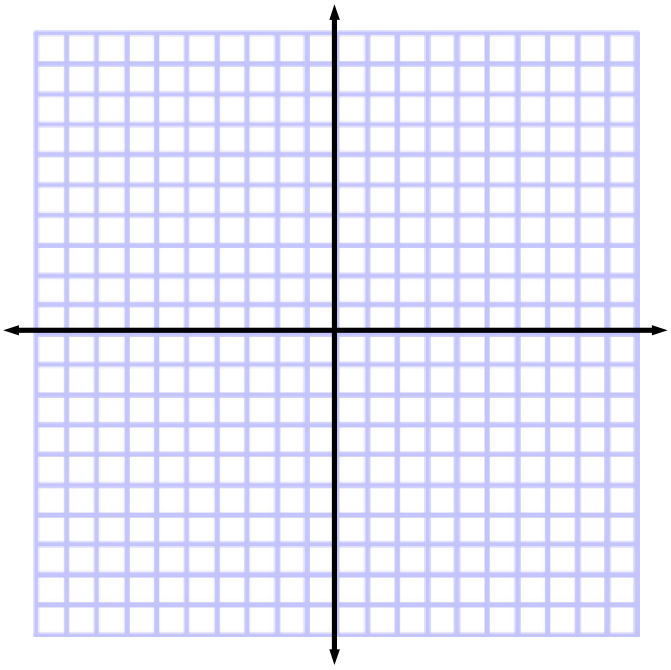
$$h(x) = \frac{4}{5}x + 2$$



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Identify the y-intercept

$g(x) = -x - 1$

Sep 5-12:55 PM

Find the slope

(-4, -5) and (-8, 3)

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Identify the slope and y-intercept

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

$4x + 5y = 8$

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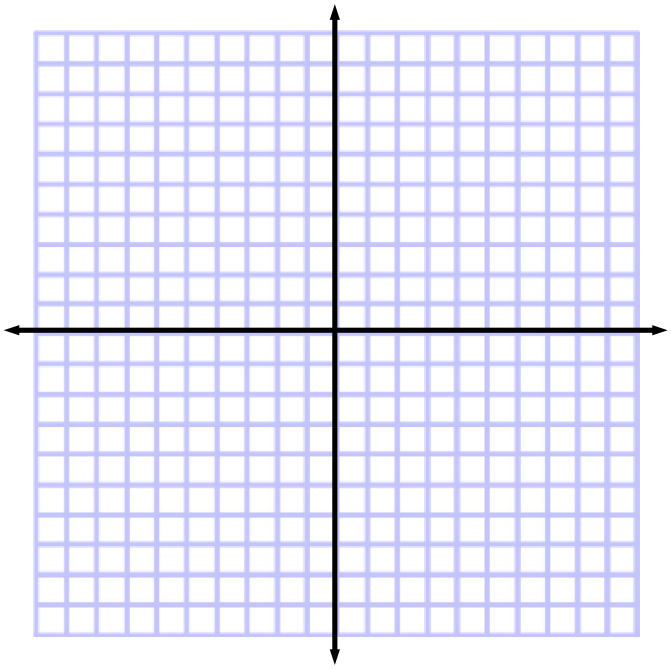
Find a linear function given the slope is 2 and the y-intercept is (0,5)

Sep 5-12:56 PM

Determine the slope and then graph

$4y + 20 = x$



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2.4 Parallel
perpendicular } lines

parallel lines have same slope

perpend. lines multiply to $=-1$

Determine if the lines are parallel perpendicular or neither

$y + 9 = 3x$

$-9 \quad -9$

$y = 3x - 9$

$m_1 = 3$

$3x - y = -2$

$-3x \quad -3x$

$-y = -3x - 2$

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

$y = 3x + 2$

$m_2 = 3$

Parallel

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Determine if the lines are parallel perpendicular or neither

$x - 2y = 3$

$-x \quad -x$

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

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

$m_1 = \frac{1}{2}$

$4x + 2y = 1$

$-4x \quad -4x$

$\frac{2y}{2} = \frac{-4x+1}{2}$

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

$m_2 = -2$

$\frac{1}{2} \cdot \frac{-2}{1} = \frac{-2}{2} = -1$

Perpendicular

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Find the x and y intercepts

$5x - 4y = 20$

$(x, 0)$ $(0, y)$

$\frac{5x}{5} = \frac{20}{5}$

$x = 4$

$(4, 0)$ $(0, -5)$

$5x - 4y = 20$

$\frac{-4y}{-4} = \frac{20}{-4}$

$y = -5$

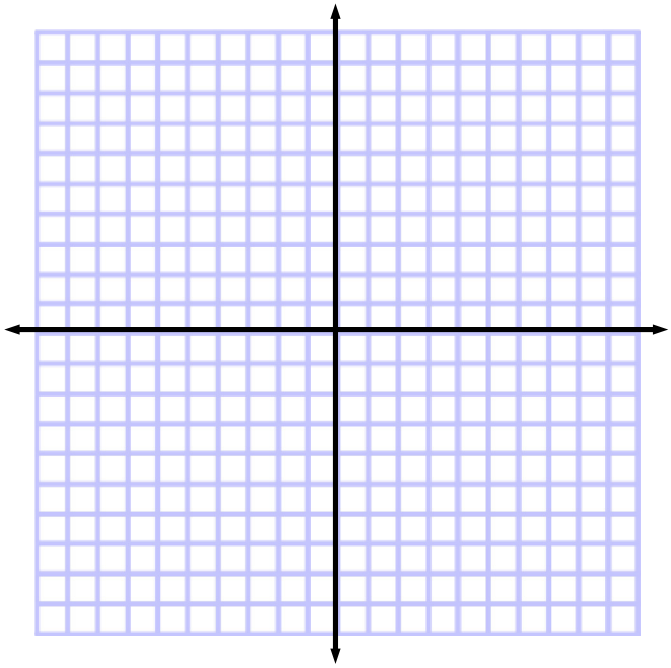
Sep 5-1:01 PM

Solve graphically

$\frac{1}{2}x + 3 = 2$

$f(x) = \frac{1}{2}x + 3$

$g(x) = 2$



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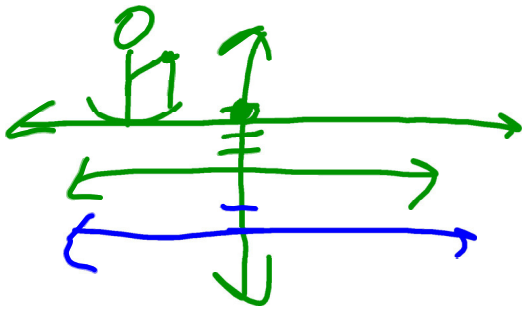
Horizontal lines have a ZERO slope

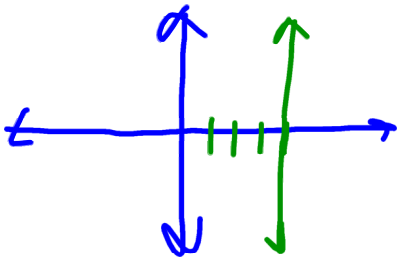
y = 3

f(x) = -2



Vertical lines have an UNDEFINED slope

x = 4



Sep 5-1:38 PM

$$3y = 7(4x-2)$$

$$\frac{3y}{3} = \frac{28x-14}{3}$$

$$y = \frac{28x}{3} - \frac{14}{3}$$

$$m = \frac{28}{3}$$

Sep 13-7:51 AM

$75 + 25x = 175$

$-75 \qquad -75$

$25x = 100$

$\frac{25x}{25} = \frac{100}{25}$ $\quad x = 4$