Linear Equations and tangent Lines

Slope and Linear equations Parallel Lines Perpendicular Lines

Domain and Range Tangent Line



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Slope and Linear equations for 100.

Determine the slope and y-intercept of the graph of the equation

$$2x + y = 4$$

Slope = 2
$$y$$
-intercept =(0,4)

Slope =
$$-2$$
 y - intercept =(4,0)

Slope = 4
$$y$$
 - intercept = (0, 2)

Slope = -2
$$y$$
- intercept =(0,4)



Slope and Linear equations for 200.

Determine the slope and y- intercept of the graph of the equation

$$y = -3$$

Slope = 0 y-intercept (0,-3)

Slope = -3 y- intercept (0,0)

Slope undefined y - intercept (0, -3)

Slope = 0 no y - intercept

Slope and Linear equations for 300.

Determine the slope and the x-intercept of the graph of the equation

$$x = -5$$

Slope = -5 x-intercept (0,1)

Slope = 1 x- intercept (0.-5)

Slope undefined no x- intercept

Slope undefined x - intercept (-5,0)

Slope and Linear equations for 400.

Find the equation of the straight line given that the y-intercept is (0, -6) and that the slope is 1/2.

$$\frac{1}{2}x + y = -6$$
$$-\frac{1}{2}x + y = -6$$

$$x + \frac{1}{2}y = -6$$

$$-\frac{1}{2}x = y + 6$$

Parallel Lines for 100.

Determine if the two equations represent lines that are parallel, perpendicular or neither

$$10x + 2y = 12$$
$$5x + y = 2$$

parallel

perpendicular

neither

Parallel Lines for 200.

Write an equation of the line that passing through (5 , 0) and is parallel to the line

$$y = -3x + 7$$

$$y = -3x + 5$$

$$y = \frac{1}{3}x + 5$$

$$y = -3x + 15$$

$$y = \frac{1}{3}x - \frac{5}{3}$$

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Parallel Lines for 300.

Find an equation of the line that passing through (1, 2) and is parallel to y=5

$$y = 5x - 3$$

$$y - 2 = 0$$

$$5x - y = 2$$

Parallel Lines for 400.

Perpendic-Determine whether the lines are parallel ular or neither

$$y = 4x - 2$$
$$-4x + y = 5$$

- parallel
- perpendicular
- neither

Perpendicular Lines for 100.

Write an equation of the line that passing through (5 , 0) and is perpendicular to the line whose equation is

$$y = -3x + 7$$

$$y = -3x + 5$$

$$y = \frac{1}{3}x + 5$$

$$y = -3x + 15$$

$$y = \frac{1}{3}x - \frac{5}{3}$$

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Perpendicular Lines for 200.

Find an equation of each line passing through (-2, -3) and perpendicular to the y- axis

$$x = -2$$

$$y = -3$$

$$x + y = -3$$

$$x = -3$$

Perpendicular Lines for 300.

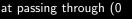
Find an equation for the line that passing through (0 , 12) and perpendicular to the x- axis

$$x = 0$$

$$x = 12$$

$$y = x + 12$$

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



Perpendicular Lines for 400.

Find an equation of the line perpendicular to x = -3

$$x = -2$$

$$y = 5x$$

$$y + 5 = 0$$

passing through (-2, 5)

$$y = 5$$

Domain and Range for 100.

Find the domain and range of the function y=2

Domain= $(-\infty, \infty)$ Range= $\{2\}$

Domain= $\{2\}$ Range= $(-\infty, \infty)$

Domain= $(-\infty, \infty)$ Range= $(2, \infty)$

Domain= $(-\infty, \infty)$ Range= $(-\infty, 2)$

Domain and Range for 200.

Find the domain and the range of the equation

$$2x + y = 5$$

Domain=
$$(-\infty, \infty)$$
 Range= $(-\infty, \infty)$

Domain=
$$(5, \infty)$$
 Range= $(2, \infty)$

$$\mathsf{Domain} = (-\infty, \infty) \quad \mathsf{Range} = (-\infty, 2)$$

Domain and Range for 300.

Find the domain and the range of the equation

$$y = |x|$$

$$\mathsf{Domain} = \{0\} \quad \mathsf{Range} = (-\infty, \infty)$$

$$\mathsf{Domain} = (-\infty, \infty) \quad \mathsf{Range} = (-\infty, \infty)$$

$$\mathsf{Domain} = (-\infty, \infty) \quad \mathsf{Range} = (0, \infty)$$

$$\mathsf{Domain} = (-\infty, \infty) \quad \mathsf{Range} = [0, \infty)$$

Domain and Range for 400.

Find the domain and the range of the equation

$$\frac{y}{5} = \frac{x-3}{5}$$

$$\begin{array}{ll} \mathsf{Domain} = (-\infty, \infty) & \mathsf{Range} = (-\infty, \infty) \\ \\ \mathsf{Domain} = (5, \infty) & \mathsf{Range} = (-\infty, \infty) \end{array}$$

$$\mathsf{Domain} = (-\infty, \infty) \quad \mathsf{Range} = (5, \infty)$$

Tangent Line for 100.

Find the equation of the tangent Line to $F(x)=x^2$

at x=2

$$y = 4$$

$$y = 4x - 4$$

$$y = 2x$$

$$y = 4x^2 - 14$$

Tangent Line for 200.

Find the equation of the tangent line to $F(x) = \tan x$ at x=0

$$y = -x$$

$$y = x$$

$$y = 0$$

$$g - c$$

$$y - x = 1$$

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Tangent Line for 300.

How many lines can be drawn from a point inside a circle to the circle?

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Tangent Line for 400.

Find all points on the graph $y = x^3 - 3x$ where the tangent line is parallel to the x- axis

(1, -1)(2,-2)

(1, -1), (2, -2)

(-1, 2), (1, 2)