Algebra 1
More on Slope-Intercept Form
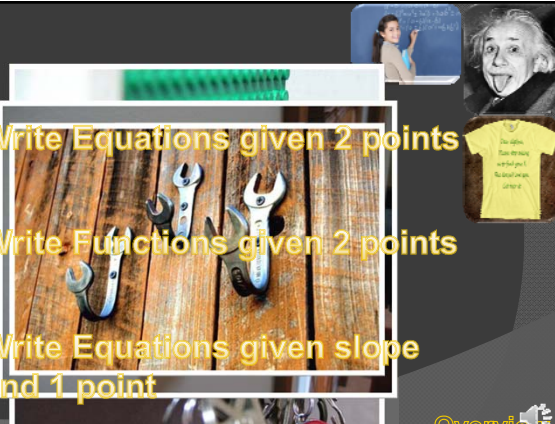
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Write Equations given 2 points
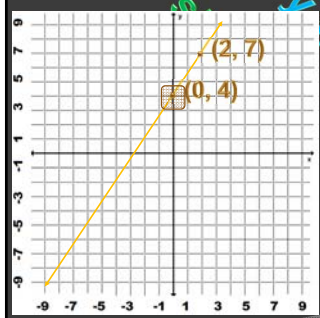
Write Functions given 2 points

Write Equations given slope and 1 point

Overview

$$y = m x + b$$

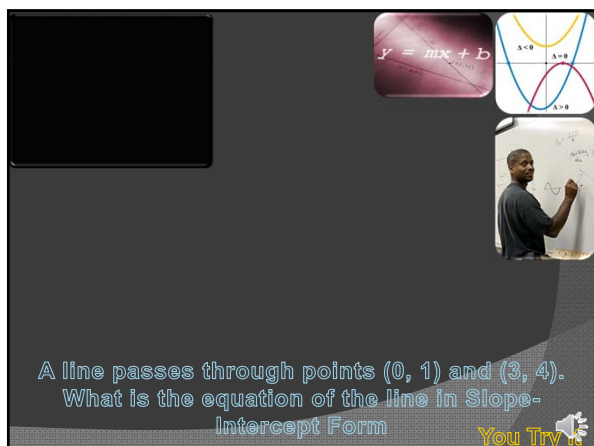(2, 7)

(0, 4)

slope

y intercept

$$= \frac{y_1 - y_2}{x_1 - x_2}$$
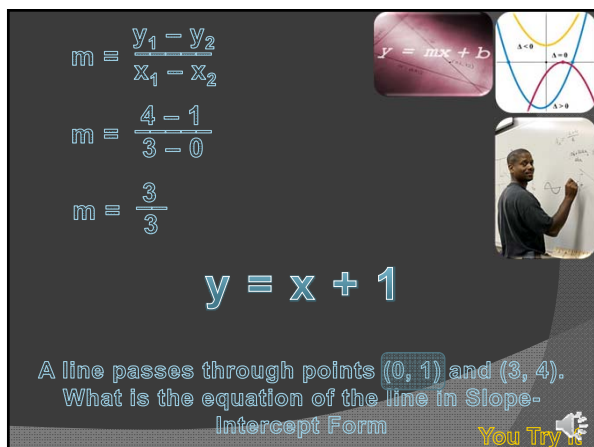
$$m = \frac{7 - 4}{2 - 0}$$

$$m = \frac{3}{2}$$

Write Equations given 2 points

A line passes through points (0, 1) and (3, 4). What is the equation of the line in Slope-Intercept Form

You Try It

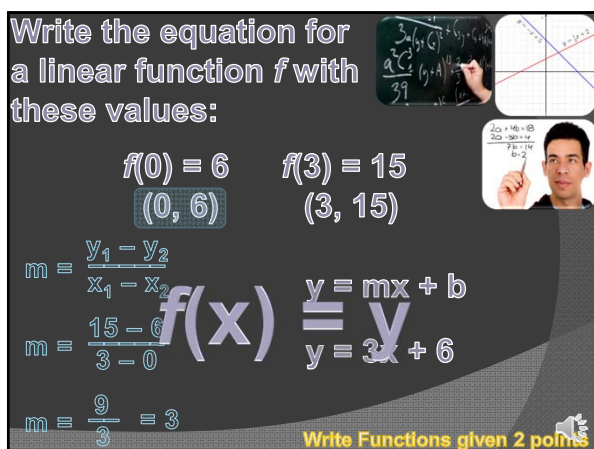
$$m = \frac{y_1 - y_2}{x_1 - x_2}$$

$$m = \frac{4 - 1}{3 - 0}$$

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

y = x + 1

A line passes through points (0, 1) and (3, 4). What is the equation of the line in Slope-Intercept Form

You Try It

Write the equation for a linear function *f* with these values:

f(0) = 6   *f*(3) = 15
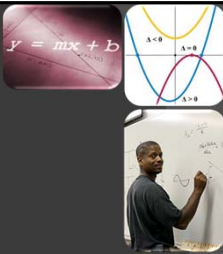(0, 6)   (3, 15)

$$m = \frac{y_1 - y_2}{x_1 - x_2}$$

$$m = \frac{15 - 6}{3 - 0}$$

$$m = \frac{9}{3} = 3$$
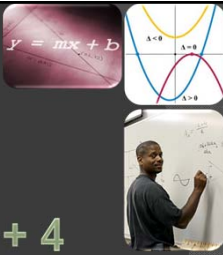
f(x) = y

y = mx + b
y = 3x + 6

Write Functions given 2 points

Write an equation for a linear function g that includes these values: $g(3) = 6$; $g(0) = 4$

You Try It

(3, 6) (0, 4)

$m = \dfrac{y_1 - y_2}{x_1 - x_2}$

$m = \dfrac{6 - 4}{3 - 0}$

$m = \dfrac{2}{3}$

$y = \frac{2}{3}x + 4$

Write an equation for a linear function g that includes these values: $g(3) = 6$; $g(0) = 4$

You Try It

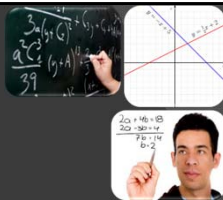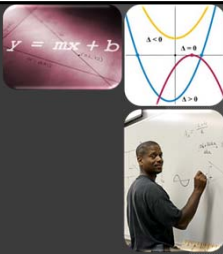$y = mx + b$

$y = -2x + b$

$6 = -2(4) + b$

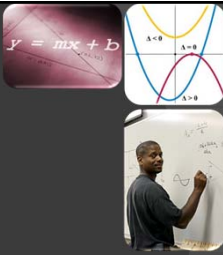$6 = -8 + b$

$14 = b$

$y = -2x + 14$

Write the equation for a line which has a slope of -2 and passes through (4, 6)

Write Equations given slope and 1 point

A line passes through points (4, 5) and has a slope of 3. What is the equation of the line?
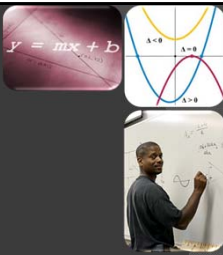
You Try It

$y = mx + b$

$y = 3x + b$

$5 = 3(4) + b$

$5 = 12 + b$

$-7 = b$

$y = 3x - 7$

A line passes through points (4, 5) and has a slope of 3. What is the equation of the line?

You Try It

You have joined an online music club, where you can download unlimited songs each month. Membership charges include an initial membership fee, plus $8 per month. After 6 months, your club fees have totaled $73.00. How much was the Initial Membership Fee?

You Try It

$y = mx + b$
$73 = 8x + b$
$73 = 8(6) + b$
$73 = 48 + b$
$\$25 = b$

You have joined an online music club, where you can download unlimited songs each month. Membership charges include an initial membership fee, plus $8 per month. After 6 months, your club fees have totaled $73.00. How much was the Initial Membership Fee? b
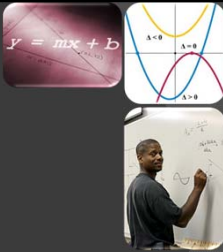
You Try It

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