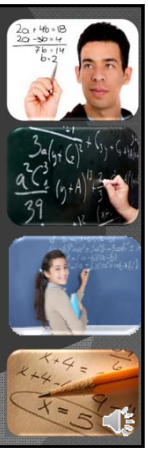
Algebra 1

Graphing Linear Equations Using Tables and Intercepts



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x intercept

y intercept

Overview

You and your sister make scented candles, and have made arrangements with a very busy gift shop to sell them. The gift shop will charge you $100 per month for a good location within the store to display your candles. You'll also pay them a commission on each sale, and after the commission and other costs, you'll make $2.80 for each candle sold. Create an equation to determine how much profit you would make each month (P) for varying number of candles sold (c).

$$P = 2.8c - 100$$

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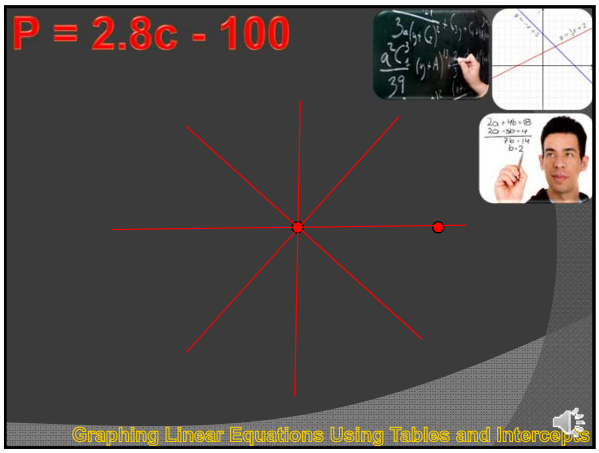
P = 2.8c - 100
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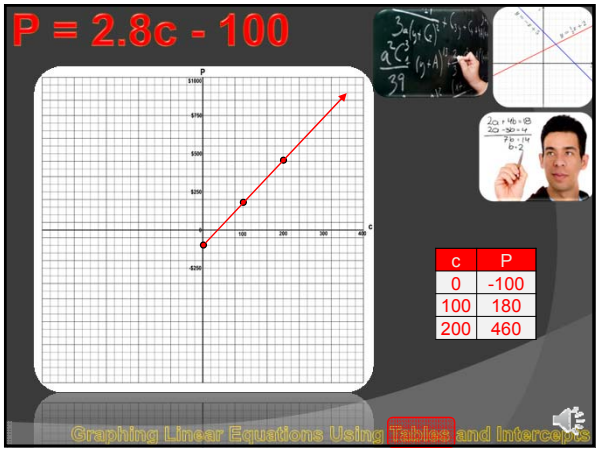
P = 2.8c - 100
c P
0 -100
100 180
200 460
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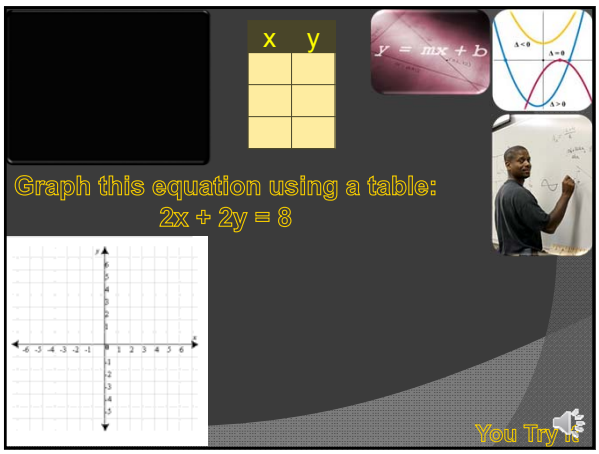
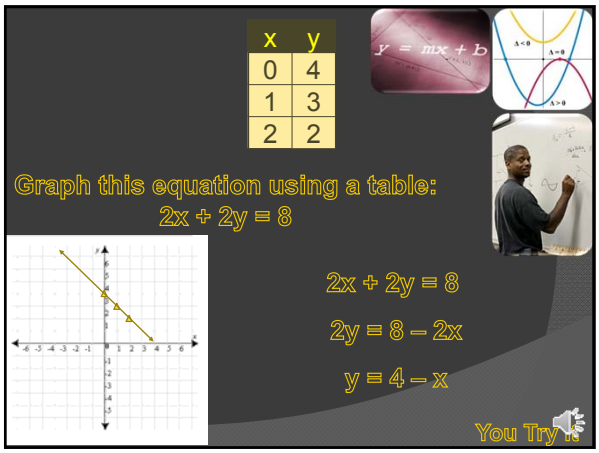
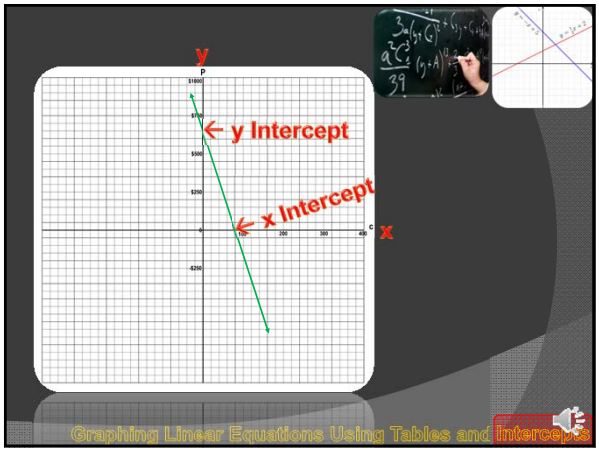

x y
y = mx + b
Graph this equation using a table:
2x + 2y = 8
You Try It


x y
0 4
1 3
2 2
Graph this equation using a table:
2x + 2y = 8
2x + 2y = 8
2y = 8 – 2x
y = 4 – x
You Try It


y
y Intercept
x Intercept
x
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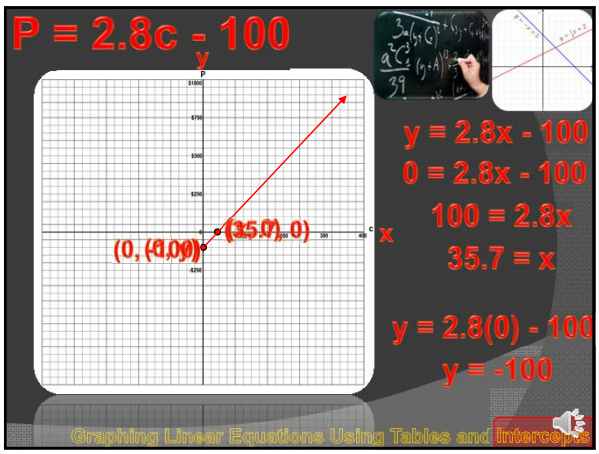
P = 2.8c - 100
y
x
(0, -100)
(35.7, 0)
y = 2.8x - 100
0 = 2.8x - 100
100 = 2.8x
35.7 = x
y = 2.8(0) - 100
y = -100
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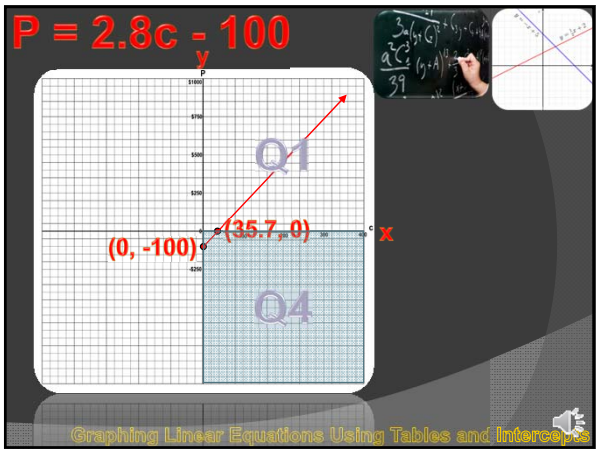
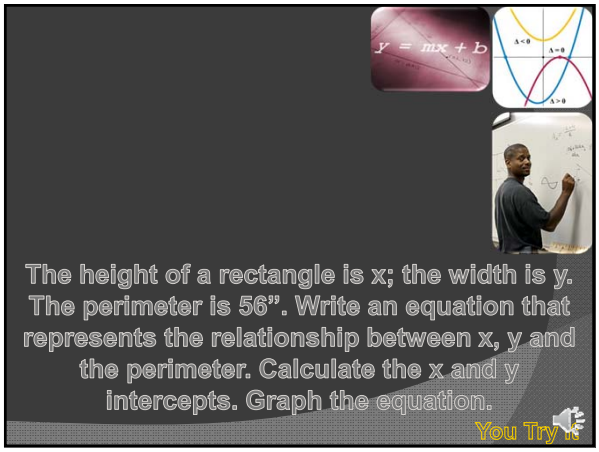
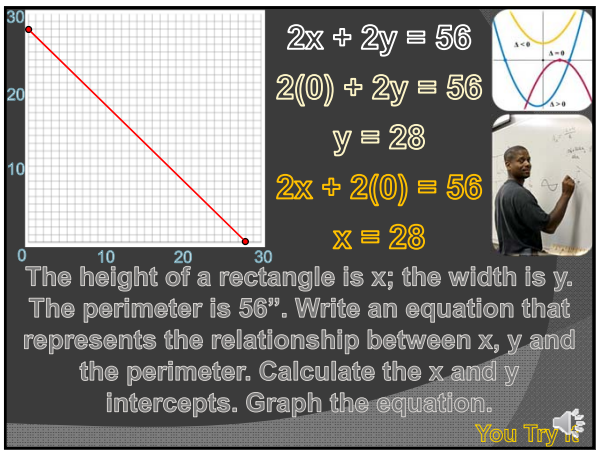

P = 2.8c - 100
y
Q1
(35.7, 0)
(0, -100)
x
Q4
Graphing Linear Equations Using Tables and Intercepts


y = mx + b
The height of a rectangle is x; the width is y. The perimeter is 56". Write an equation that represents the relationship between x, y and the perimeter. Calculate the x and y intercepts. Graph the equation.
You Try It


30
20
10
0
10
20
30
2x + 2y = 56
2(0) + 2y = 56
y = 28
2x + 2(0) = 56
x = 28
The height of a rectangle is x; the width is y. The perimeter is 56". Write an equation that represents the relationship between x, y and the perimeter. Calculate the x and y intercepts. Graph the equation.
You Try It