x = cost of large, y = cost of small

You buy 10 large pizzas & 5 small pizzas and pay a total of $160.

EQ: $10x + 5y = 160$

Graph: $x = 0$

$10 \cdot 0 + 5y = 160$

$\frac{5y}{5} = \frac{160}{5}$

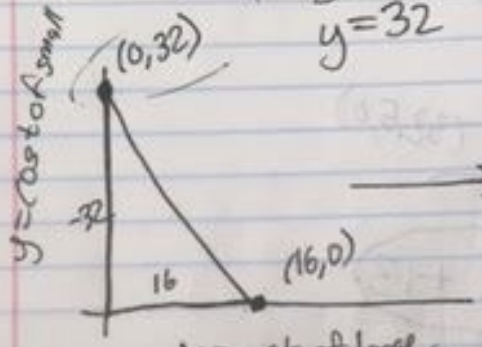
$y = 32$

$y = 0$

$10x + 5 \cdot 0 = 160$

$\frac{10x}{10} = \frac{160}{10}$

$x = 16$



Starting amount / y-intercept

$y = mx + b$

Slope = $\frac{\text{rise}}{\text{run}}$

$y = \frac{-32}{16}x + 32$

$y = -2x + 32$

$10x + 5y = 160$

$-10x \quad -10x$

$\frac{5y}{5} = \frac{-10x}{5} + \frac{160}{5}$

$y = -2x + 32.$

b) A large pizza costs $12.

$y = -2(12) + 32$

$-24 + 32$

$y = 8$

The cost of a small pizza is $8

x = cost of hat, y = cost of shirt

EQ: $4x + 10y = 130$

Graph: $4 \cdot 0 + 10y = 130$

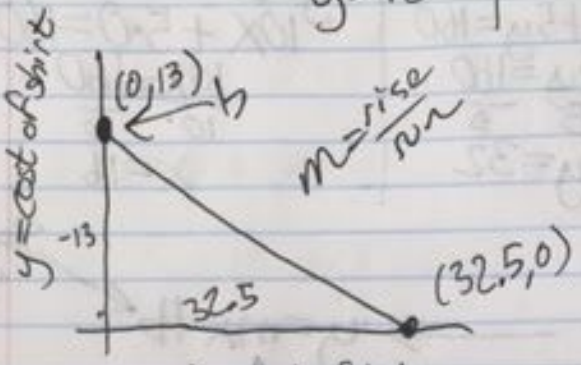
$10y = 130$

$y = 13$

$4x + 10 \cdot 0 = 130$

$4x = 130$

$x = 32.5$



EQ: $y = \frac{-13}{32.5}x + 13$

OR

$4x + 10y = 130$

$-4x \quad -4x$

$\frac{10y}{10} = \frac{-4x}{10} + \frac{130}{10}$

$y = \frac{-4}{10}x + 13$

b) $y = \frac{-4}{10} \cdot 20 + 13$

$y = \frac{-80}{10} + 13$

$y = -8 + 13$

$y = 5$