

Height VS Distance

Standard Form Factored Vertex

$$y = -0.2x^2 + 7.866x + 0.273676$$

$$\{0 \leq x \leq 4.2533\}$$

$$y = -0.2(x - 0.31)(x - 4.2533)$$

$$\{0 \leq x \leq 4.2533\}$$

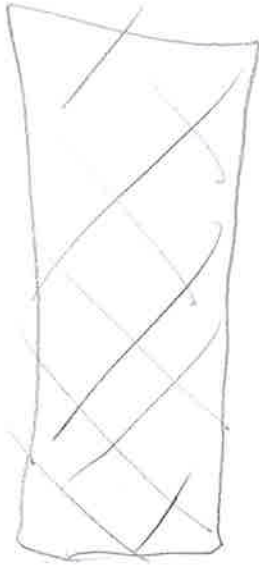
$$y = -0.2(x - 1.971)^2 + 1.059$$

$$\{0 \leq x \leq 4.2533\}$$

Meaning

$y = -0.2x^2 + 7.866x + 0.273676$
 height of pony ball at that point in distance

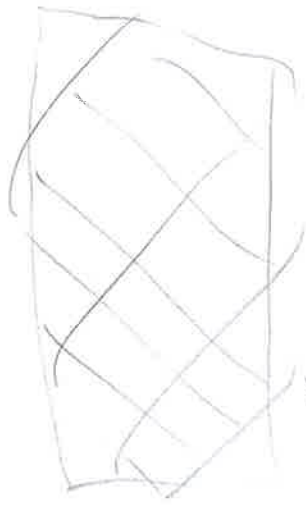
The x coordinate represents the distance the ball has traveled



$y = 0.2(x + 0.31)(x - 4.2533)$
 when the ball is launched from 0.31 meters and when it lands at 4.2533 meters

$\{0 \leq x \leq 4.2533\}$
 The x value is greater or equal to 0 or less than and equal to 4.2533. The distance of ball has traveled is greater than 0 and less than 4.2533 m

$y = -0.2(x - 1.971)^2 + 1.059$
 height of ball at certain distance
 distance the ball has traveled when it reaches the ball trap



Graph

Desmos | Graphing Calculator

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