

Height vs Time

Standard

$$y = -6.105x^2 + 4.2x + 0.2661$$

$$\{0 \leq x \leq 0.7523\}$$

Factored

$$y = -6.105(x + 0.56)(x - 0.75)$$

$$\{0 \leq x \leq 0.75\}$$

Vertex

$$y = -6.105(x - 0.35)^2 + 1.00$$

$$\{0 \leq x \leq 0.7553\}$$

Meaning

$$y = -6.105x^2 + 4.2x + 0.2661$$

The height of the ping pong ball at a certain time.

The x-axis is the time in seconds.

The y-intercept is the height of the ball in meters.

$$\{0 \leq x \leq 0.7523\}$$

The x value is greater or equal to 0 but less than or equal to 0.7523. The time of the ping pong ball is 0.7523 seconds.

$$y = -1.05(x + 0.56)(x - 0.75)$$

The time is when the ping pong ball is fired from the ground.

The time is when the ping pong ball is fired from the ground.

$$\{0 \leq x \leq 0.75\}$$

The time is when the ping pong ball is fired from the ground.

$$y = -6.105(x - 0.35)^2 + 1$$

The height of the ping pong ball at a certain time.

The time is when the ping pong ball is fired from the ground.

$$\{0 \leq x \leq 0.7553\}$$

The time is greater or equal to 0.7553 seconds.

Desmos | Graphing Calculator

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Graph

