

Angry Mira throws a ball into the air with an initial upward velocity of 50 feet/second. Its height h , in feet after t seconds is given by the function $h = -16t^2 + 50t + 3$.

In how many seconds will the ball reach its maximum height? _____

What is the ball's maximum height? _____

Graph the quadratic function.

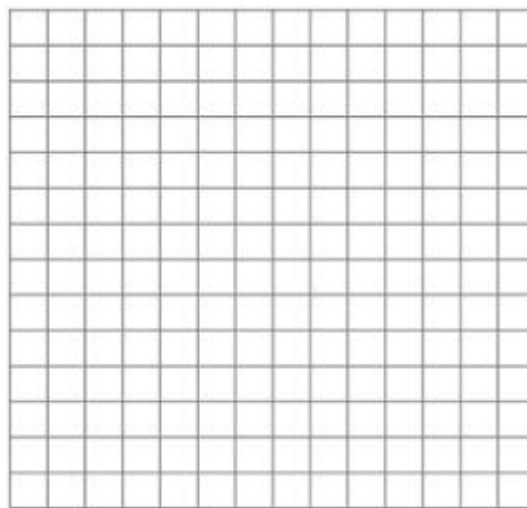
What does the 50 represent in the equation?

What does the 3 represent?

What is the y -intercept and what does it represent.

How long will it take the ball to reach its maximum height?

What is the balls maximum height?



Ali tosses Sara's notebook into the air with an upward velocity of 40 feet/second. Its height h , in feet after t seconds is given by the function $h = -16t^2 + 40t + 6$.

Graph the quadratic function.

What does the 40 represent in the equation?

What does the h represent?

What is the y -intercept and what does it represent.

In how many seconds will the notebook reach its maximum height?

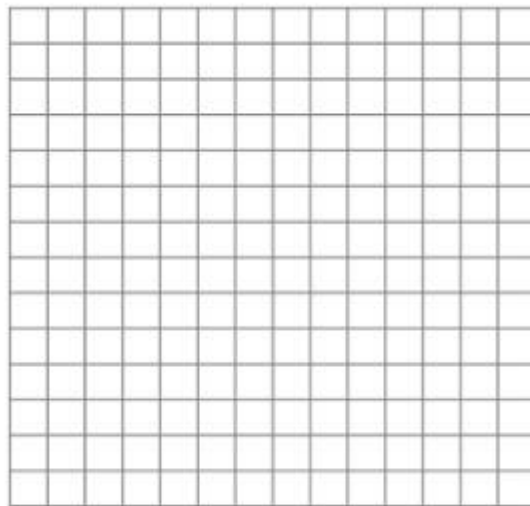
What is the notebook's maximum height?



Jonathan and Moe are hiking in the mountains. Jonathan wants to climb to a ledge that is 20 ft above him. The height of the grappling hook he throws is given by the function

$$h = -16t^2 + 32t + 5.$$

What is the maximum height of the grappling hook? Can he throw it high enough to reach the ledge? Sketch the graph.



What does the t represent in the equation?

What does the h represent?

What is the y -intercept and what does it represent.

Laila is trying to dunk a basketball. She needs to jump 2.5 ft in the air to dunk the ball. The height that her feet are above the ground is given by the function $h = -16t^2 + 12t$.

What is the maximum height her feet will be above the ground? Will she be able to dunk the basketball?

What does the t represent in the equation?

What does the h represent?

What is the y -intercept and what does it represent.

