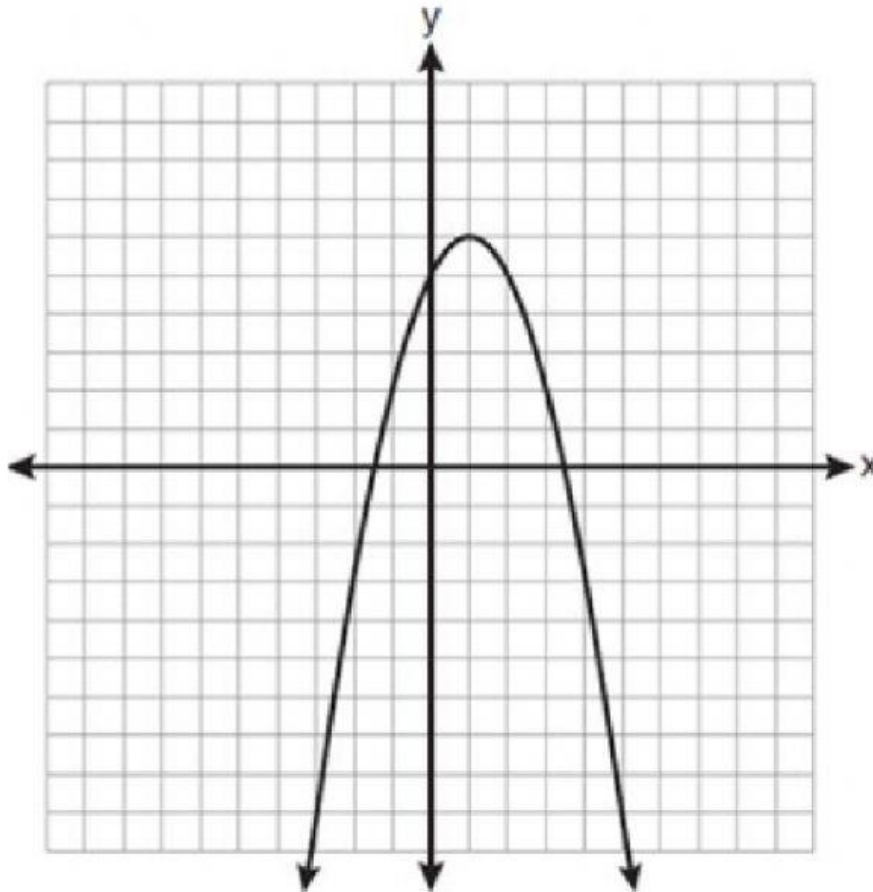


APPLICATIONS

Fill in the blanks.

1) Look at the graph!



The coordinate of y -axis is (_____, _____).

The maximum point is (_____, _____).

When $y = 2$, the coordinates are (_____, _____) and (_____, _____).

**APPLICATIONS**

- 2) After t seconds, a ball tossed in the air from the ground level reaches a height of h feet given by the function $h(t) = 144t - 16t^2$.

a) What is the height of the ball after 3 seconds?

_____ m

b) What is the maximum height the ball will reach?

_____ m

c) How long will the ball hit the ground again?

_____ s

- 3) The formula for throwing a baseball in the air is represented by

$h(t) = -16t^2 + 12t + 40$, where h is the height of the ball.

a) What is the initial height? ($t = 0$)

_____ m

b) What is the maximum height the ball will reach?

_____ m

c) How long will the ball hit the ground again?

_____ s

**APPLICATIONS**

4) The function $h(t) = 1700 - 16t^2$ gives an object's height h , in feet, and t , in seconds.

a) What is the initial height? ($t = 0$)

_____ m

b) What is the maximum height the ball will reach?

_____ m

c) How long will the ball reach 1696 m?

_____ s

5) A ball is thrown into the air with an initial upward velocity of 48 ft/s. Its height h , in feet, after t , in seconds is given by the function $h(t) = -16t^2 + 48t + 4$.

a) What is the initial height? ($t = 0$)

_____ m

b) What is the maximum height the ball will reach?

_____ m

c) How long will the ball reach the ground again?

_____ s