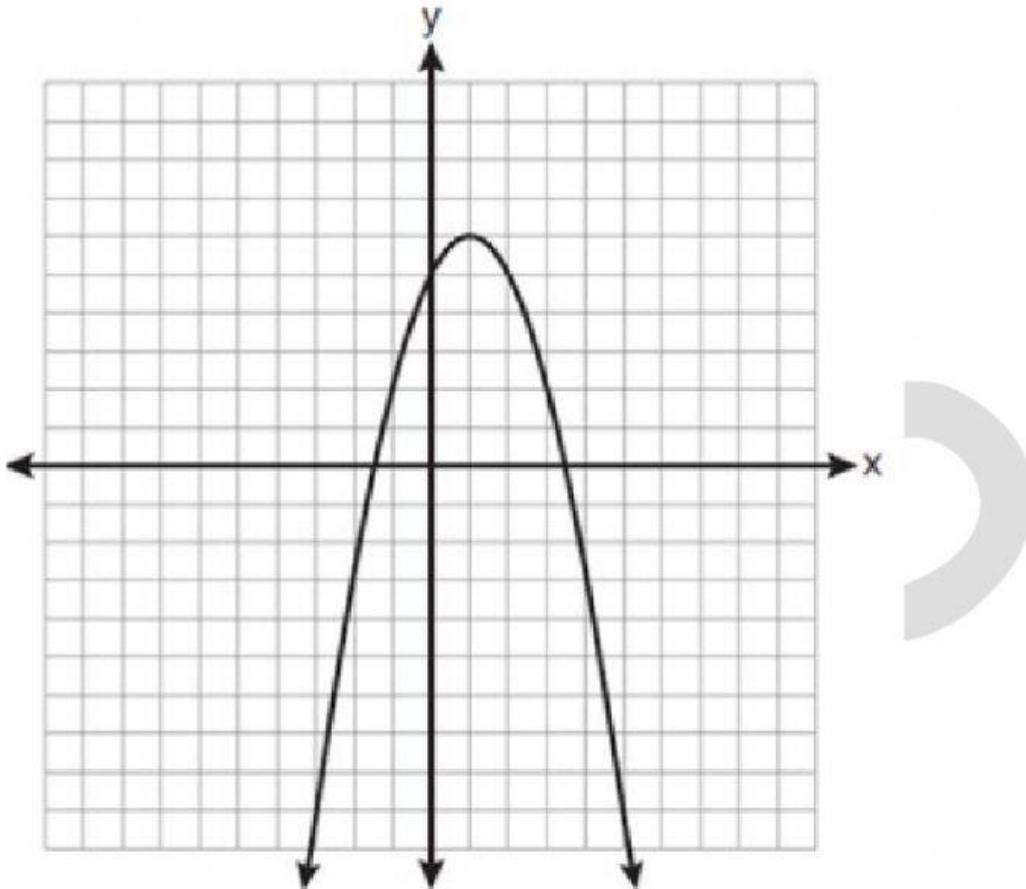# APPLICATIONS

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 (_____, _____).

SHINING STAR

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

SHINING STAR

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. It 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

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