Day 10 - Practice Core Assessment Handout

Tuesday, March 17, 2020 2:26 PM

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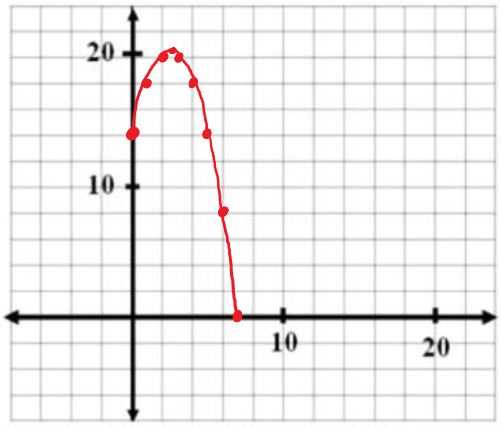
1.) The following equation represents the path of a softball being thrown, where x represents the time (seconds) and y represents the height (feet) of the softball. $y = -x^2 + 5x + 14$

a) Graph the equation that represents the path of the softball.

x	y
0	14
2	20
4	18
6	8
7	0



b) Find the height at the initial time, x=0.

$y = -(0)^2 + 5(0) + 14$

$y = 14$ feet

c) At what time does the ball reach its maximum height?

$x = \frac{-b}{2a} = \frac{-5}{2(-1)} = \frac{5}{2} =$ 2.5 seconds

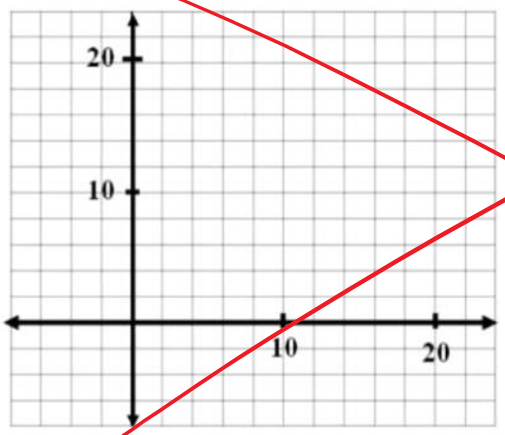
d) What is the maximum height the ball reaches?

$y = -(2.5)^2 + 5(2.5) + 14$

$y =$ 20.25 feet

1.) The following equation represents the path of a softball being thrown, where x represents the time (seconds) and y represents the height (feet) of the softball. $y = -x^2 + 5x + 14$

a) Graph the equation that represents the path of the softball.



b) Find the height at the initial time, x=0.

c) At what time does the ball reach its maximum height?

d) What is the maximum height the ball reaches?

4.) The path of an object is represented by the equation, $y = -(x-2)^2 + 4$. Where x represents time and y represents the position of the object in meters.

a) After how many seconds has the rocket reached its maximum height and what is the maximum position?

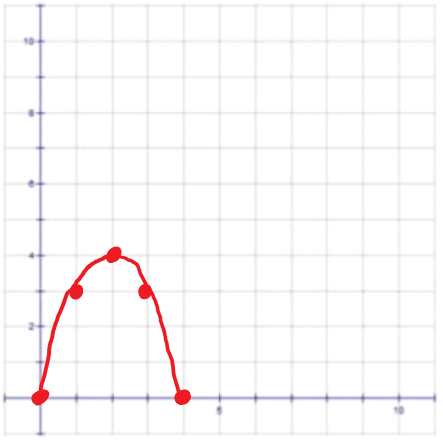
2 seconds , 4 feet

b) What is the x-intercept and what does it represent?

(0,0) → represents the starting time + position
(at time = 0, the object is on the ground)

(4,0) → represents the final position
(4 seconds in, the object hits the ground again)

c) Graph the equation.



4.) The path of an object is represented by the equation, $y = -(x-2)^2 + 4$. Where x represents time and y represents the position of the object in meters.

a) After how many seconds has the rocket reached its maximum height and what is the maximum position?

b) What is the x-intercept and what does it represent?

c) Graph the equation.