

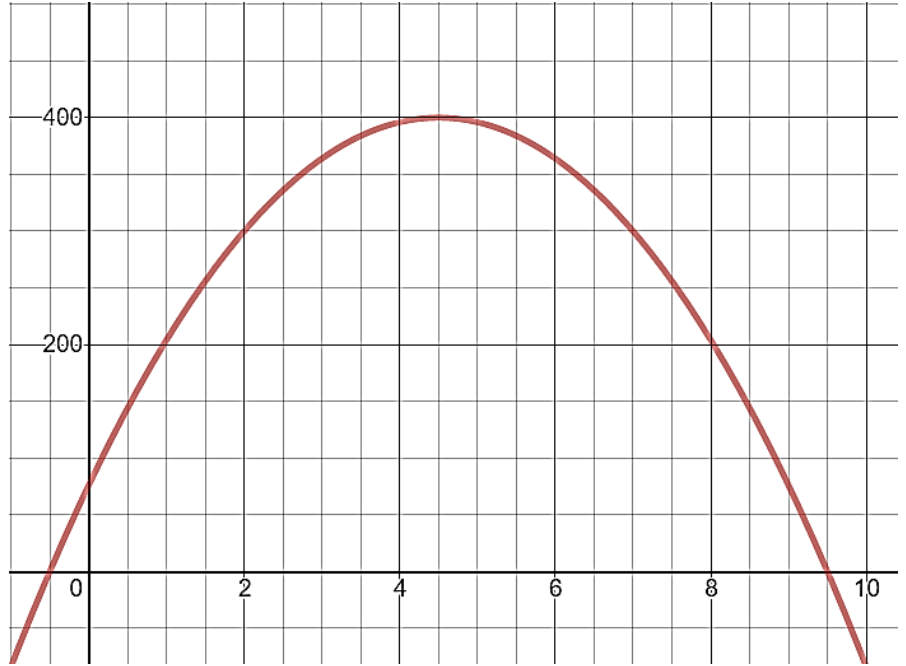
6. During an archery class Mrs. Pitcher climbs to the top of a 76 foot tree and shoots an arrow upward with a velocity of 144 feet per second. The equation below models this scenario.

$$h(t) = -16t^2 + 144t + 76$$

- a. How long is the arrow in the air?

- b. What is the maximum height the arrow will reach?

- c. At what time will the arrow reach the maximum height?



- d. Use the equation to find the exact height the arrow is after 3 seconds.