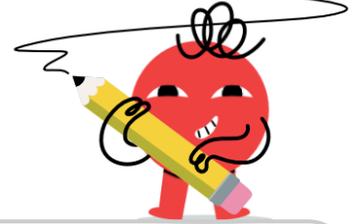




## Quadratic Equation Word Problem To Optimization (x) - Height over Ground



1 Given this equation for the height of a water jet as a function of distance from the fountain, where is it at its highest point?

$$h(x) = -11x^2 + 2x + 9$$

A  $x = 0.159m$

B  $x = 2.341m$

C  $x = 0.091m$

2 Given this equation for the height of a water jet as a function of distance from the fountain, where is it at its highest point?

$$h(x) = -4x^2 + 10x + 6$$

A  $x = 1.5m$

B  $x = 1.25m$

3 Given this equation for the height of a long jumper as a function of distance from the line, where are they at their highest point?

$$h(x) = -2x^2 + 11x + 4$$

A  $x = 2.5m$

B  $x = 2.75m$

C  $x = 4.25m$

4 Given this equation for the height of a water jet as a function of distance from the fountain, where is it at its highest point?

$$h(x) = -8x^2 + 7x + 11$$

A  $x = 3.188m$

B  $x = 0.438m$

C  $x = 0.313m$

5 Given this equation for the height of a long jumper as a function of distance from the line, where are they at their highest point?

$$h(x) = -11x^2 + 2x + 3$$

A  $x = 0.659m$

B  $x = 0.091m$

C  $x = 1.909m$

6 Given this equation for the height of a long jumper as a function of distance from the line, where are they at their highest point?

$$h(x) = -3x^2 + 8x + 7$$

A  $x = 1.583m$

B  $x = 1.333m$

C  $x = 2.333m$

7 Given this equation for the height of a long jumper as a function of distance from the line, where are they at their highest point?

$$h(x) = -7x^2 + 7x + 2$$

A  $x = 2.5m$

B  $x = 0.5m$

8 Given this equation for the height of a water jet as a function of distance from the fountain, where is it at its highest point?

$$h(x) = -6x^2 + 5x + 7$$

A  $x = 0.417m$

B  $x = 0.833m$