



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



1 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?

$$h(x) = -5x^2 + 5x + 9$$

A	B
$x = 3.5m$	$x = 0.5m$

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?

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

A	B
$x = 0.75m$	$x = 4.75m$
C	
$x = 5.75m$	

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?

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

A	B
$x = 2.75m$	$x = 7.75m$
C	
$x = 3.75m$	

4 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?

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

A	B
$x = 1.25m$	$x = 4.75m$
C	
$x = 1.75m$	

5 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?

$$h(x) = -8x^2 + 11x + 6$$

A	B
$x = 2.688m$	$x = 4.688m$
C	
$x = 0.688m$	

6 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?

$$h(x) = -7x^2 + 9x + 3$$

A	B
$x = 0.643m$	$x = 2.357m$
C	
$x = 4.643m$	

7 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?

$$h(x) = -5x^2 + 5x + 4$$

A	B
$x = 2.5m$	$x = 0.5m$
C	
$x = 5.5m$	

8 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?

$$h(x) = -9x^2 + 6x + 6$$

A	B
$x = 0.333m$	$x = 1.333m$
C	
$x = 4.667m$	