6.

Solution

Quadratic function: is a function that can be written in the form:

$h(v)=av^2+bv+c$ where a, b, and c are real numbers and $a\neq 0$

we have $h(v)=-3v^2+12v+16$, note: $-3v^2+12v+16$ is in vh-plane

Here, we know that $a=-3$, $b=12$, $c=16$

Since $a<0$,we know that the h-coordinate of the vertex is a maximum.However,to find the h-coordinate of our vertex we first need to find the v-coordinate of the vertex by using $v=-\frac{b}{2a}=-\frac{12}{-6}=2$ Now that we have the v-coordinate, we can find the h-coordinate

of the vertex by finding $h(2)=-3(2)^2+12(2)+16=-12+24+16=28$ Maximum=28