2.

Solution

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

$v(j)=aj^2+bj+c$ where a, b, and c are real numbers and $a\neq 0$

we have $v(j)=-j^2-12j+14$, note: $-j^2-12j+14$ is in jv-plane

Here, we know that $a=-1$, $b=-12$, $c=14$

Since $a<0$,we know that the v-coordinate of the vertex is a maximum.However,to find the v-coordinate of our vertex we first need to find the j-coordinate of the vertex by using $j=-\frac{b}{2a}=-\frac{-12}{-2}=-6$ Now that we have the j-coordinate, we can find the v-coordinate of the vertex by finding $v(-6)=-1(-6)^2-12(-6)+14=-36+72+14=50$ Maximum=50