1.

Solution

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

$g(x)=ax^2+bx+c$ where a, b, and c are real numbers and $a\neq 0$

we have $g(x)=-x^2-2x$, note: $-x^2-2x$ is in xg-plane

Here, we know that $a=-1$, $b=-2$, $c=0$

Since $a<0$,we know that the g-coordinate of the vertex is a maximum.However,to find the g-coordinate of our vertex we first need to find the x-coordinate of the vertex by using $x=-\frac{b}{2a}=-1=-1$ Now that we have the x-coordinate, we can find the g-coordinate

of the vertex by finding $g(-1)=-1(-1)^2-2(-1)-0=-1+2-0=1$ Maximum=1