2.

Solution

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

$s(e)=ae^2+be+c$ where a, b, and c are real numbers and $a\neq 0$

we have $s(e)=e^2-6e-24$, note: $e^2-6e-24$ is in es-plane

Here, we know that $a=1$, $b=-6$, $c=-24$

Since $a>0$,we know that the s-coordinate of the vertex is a minimum. However,to find the s-coordinate of our vertex we first need to find the e-coordinate of the vertex by using $e=-\frac{b}{2a}=-\frac{-6}{2}=3$ Now that we have the e-coordinate, we can find the s-coordinate of the vertex by finding $s(3)=1(3)^2-6(3)-24=9-18-24=-33$ Minimum$=-33$