2.

Solution

To find the vertex, we look at the coefficients in the function $e(y) = ay^2 + by + c$
in this equation, $a = 2$ and $b = 3$
The first coordinate of the vertex has the formula: $\frac{-b}{2a}$ now, plugging into formula to get:
$\frac{-b}{2a} = -\frac{3}{2(2)} = -\frac{3}{4}$
The second coordinate of the vertex is $e(-\frac{3}{4}) = 2(-\frac{3}{4})^2 + 3(-\frac{3}{4}) - 7$
$= -\frac{65}{8}$
Therefore, the vertex of the graph of f is $(-\frac{3}{4}, -\frac{65}{8})$