3.

Solution

To find the vertex, we look at the coefficients in the function $n(m) = am^2 + bm + c$
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 $n\left(-\frac{3}{4}\right) = 2\left(-\frac{3}{4}\right)^2 + 3\left(-\frac{3}{4}\right) - 6$

$= -\frac{57}{8}$

Therefore, the vertex of the graph of f is $\left(-\frac{3}{4}, -\frac{57}{8}\right)$