Notice that by substitution we have the following:

$$\begin{aligned} f(x) &= a_2x^2 + a_1x + a_0 \\ &= x^2 + 4x - 5 \end{aligned}$$

We can complete the square to rewrite this as

$$f(x) = (x + 2)^2 - 9$$

Notice that by substitution we get the equation $f(x) = x^2 + 4 \cdot x - 5$. This is a quadratic function in the variable x, and we can identify the vertex by completing the square...

$$\Delta = \left(\sum_{n=0}^{N} \left(\frac{1}{a+b} \right)^2 \right)^2$$