If we could not use `math.sqrt` to compute the square root of a float number $f$, then we could use Newton’s method on the equation $x^2 - f = 0$, building the iteration

$$x_{k+1} = x_k - \frac{x_k^2 - f}{2x_k}, \quad k = 0, 1, \ldots, \quad x_0 = f.$$ 

We stop the iteration when the decrement $\frac{x_k^2 - f}{2x_k}$ is less than $10^{-8}$.

1. Draw the flowchart for this algorithm.

2. Give Python code for this algorithm.