The function $f(x) = x^2 + 2x + 1$ is a quadratic polynomial.
Here is the same function, centered and displayed on its own line:

$$f(x) = x^2 + 2x + 1$$

We can also write it using the 'equation' environment to give it a number:

$$f(x) = x^2 + 2x + 1 \tag{1}$$

And here is a more complex function using some common math notation:

$$g(x) = \sin(\theta) + \int_0^x t^3 \, dt \tag{2}$$