Problem 9. *Omar:*

Claim that $f(z) = z^3$ is not discrete analytic at $z = 0$. We verify that:

$$\frac{(i+1)^3 - 0^3}{i+1} = 2i, \frac{(1)^3 - i^3}{1-i} = i.$$

These quantities are not equal thus z^3 is not discrete holomorphic.