The Argument Principle

$$N = Z - P$$

- If $N < 0$, it means that $H(C)$ encircles the origin counterclockwise ($\circlearrowleft$).
- We do not want C to pass through any pole of H because then $H(C)$ would not be defined.
- We also do not want C to pass through any zero of H because then $0 \in H(C)$, so #(encirclements) is not well-defined.