

8. Census figures for the US population (in millions) are listed in the table below. Let f be the function such that $P = f(t)$ is the population (in millions) at year t .

Year	1950	1960	1970	1980	1990
Pop.	150.7	179.0	205.0	226.5	248.7

Assume that f is increasing, so f is invertible.

(a) (3 points) What is the meaning of $f^{-1}(200)$?

(b) (3 points) What does the derivative of $f^{-1}(P)$ at $P = 200$ represent? What are its units?

(c) (3 points) Estimate $f^{-1}(200)$.

(d) (3 points) Estimate the derivative of $f^{-1}(P)$ at $P = 200$.