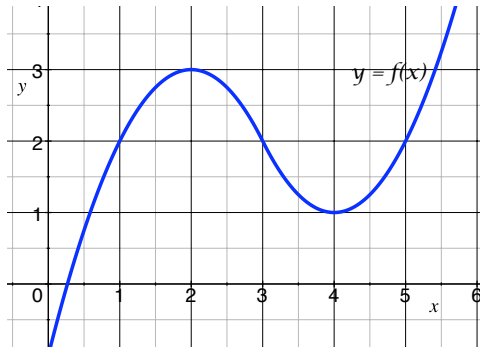


1. The graph of the function f is given below.



- (a) (1 pts.) Fill in the blanks using the graph.

i) $f(4) = ?$ ii) $f(2) = ?$

- (b) (2 pt.) Solve $f(x) = 2$ for x .

2. (2 pts.) Find the average rate of change of $g(x) = 2x^2 + 3$ over the interval $-1 \leq x \leq 3$.
3. Suppose the population of a town at time 0 (years after 2000) is 52 thousand people. Afterwards, it increases by 3 thousand people/year.
- (a) (2 pts.) Find a formula for the population P as a function of t , the number of years after 2000.
- (b) (1 pts.) What is the population of the town in the year 2020?
4. (2 pts.) Find an equation of a line through the point $(2, -1)$ with slope 5.