1.1 Defn A function consists of a domain (a set \( A \), for us usually just the real numbers) and a rule that assigns to each element \( x \) of \( A \) exactly one element, called \( f(x) \), of a set \( B \) (the range).
\[ f(-4) = -2 \quad g(3) = 4 \]
\[ \begin{align*}
\text{b.} & \quad f(-2) = 2, \quad g(-2) = 1, \quad g(2) = 2 \\
\text{c.} & \quad x = -3, \quad f(x) = 4 \\
& \quad f(x) = -1 \quad f(-3) = -1 \quad f(4) = -1
\end{align*} \]
\[ \text{Ans: } x = -3, 4 \]
\[ \text{domain } = \mathbb{R} \]
\[ \text{range } = [-2, 4] \]
\[ 0 \leq x \leq 4 \]
\[ 0 \leq x < \infty \]
\[ \{ y \mid \frac{1}{2} \leq y \leq 4 \} \]