(1) Decide if the following map is surjective, injective, bijective?
(a) \( f : \mathbb{R} \to [-1, 1], f(x) = \cos(x) \);
(b) \( f : \mathbb{R} \times \mathbb{R} \to \mathbb{R}, f(x, y) = x - 2y \);
(c) \( f : [0, \infty) \to (0, 1], f(x) = 1/(x^2 + 1) \).

(2) Construct bijections between
(a) \( \mathbb{N} \) and \( \mathbb{N} \setminus \{1, 3\} \);
(b) \( \mathbb{R} \) and \( \mathbb{R}_{>0} \) (Hint: some well-known function from calculus may be useful...)

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640:300 WORKSHOP 10
SURJECTIVE AND INJECTIVE FUNCTIONS