

Homework # 19 (due 04/15/2020)

1. a) How many bijective functions are from $S = \{1, 2, 3, 4\}$ to $T = \{5, 6, 7, 8\}$? Please explain.
b) How many injective functions are from $S = \{1, 2, 3\}$ to $T = \{1, 2, 3, 4, 5\}$? Please explain.
2. For each pair of sets below find a bijection from one set to another:
 - a) From $(-\pi/2, \pi/2)$ to \mathbb{R} ,
 - b) From an arbitrary open interval (a, b) to $(-\pi/2, \pi/2)$.
(Hint: Use a function in the form $y = mx + d$).
 - c) From (a, b) to \mathbb{R} .