

TAIU 10. Duggal. 2021-09-16

Svar: 1 a. $x=1$

1 b. $x=3$

1 c. $f^{-1}(y) = \frac{5e^y - 1}{1 + 2e^y}$

2 a. $-1 \leq x < 0$, $1 \leq x \leq 3$.

2 b. $x = -1$

3 a.
$$x = \begin{cases} \pi/2 + n\pi \\ \pm \frac{2\pi}{3} + n2\pi \end{cases}, n \in \mathbb{Z}.$$

3 b. $\frac{4\pi}{3} < x < \frac{5\pi}{3}$

4 a. $|z| = \sqrt{2}$

$$\arg z = \frac{\pi}{4}$$

4 b. $z_1 = -1$, $z_2 = -i$, $z_{3,4} = \pm \frac{\sqrt{3}}{2} + \frac{i}{2}$