

Question 5: (6 Marks) (Time 15 minutes)

Let $R1 = \{(1, 2), (2, 1), (3, 2)\}$ and $R2 = \{(1, 1), (2, 1), (3, 1)\}$ be relations from $\{1, 2, 3\}$ to $\{1, 2\}$. Find

- 5.1. $(R1 \cup R2)^{-1}$ and $\overline{R1 \cup R2}$
- 5.2. $(R1 \cap R2)^{-1}$ and $\overline{R1 \cap R2}$
- 5.3. $(R1 - R2)^{-1}$ and $\overline{R1 - R2}$
- 5.4. $(R2 - R1)^{-1}$ and $\overline{R2 - R1}$
- 5.5. $(R1^{-1})^{-1}$ and $\overline{R1^{-1}}$