

Worksheet: Relations and Functions (Class 12)

Rajasthan State Board · Class 12 · Mathematics · 3 questions · 13 marks

Name: _____	Date: _____	Score: _____ / 13
-------------	-------------	-------------------

Q1. Show that the relation R in the set \$f\$ integers defined by $R = \{(a,b) : 2 \text{ divides } (ab)\}$ is an equivalence relation. *[3 marks]*

Q2. Let $f: \mathbb{R} \rightarrow \mathbb{R}$ be defined by $f(x) = 2x + 3$. Show that f is bijective and find f^{-1} . *[4 marks]*

Q3. Let $f: A \rightarrow B$ and $g: B \rightarrow C$ be two functions. Prove that if both f and g are onto, then $g \circ f: A \rightarrow C$ is also onto. Is the converse true? Justify. *[6 marks]*