Tuesday, October 13, 2009

Q1]... Define what it means for a function $f : A \to B$ to be *injective.*

Define what it means for a function $f : A \to B$ to be *surjective.*

Say whether each of the following functions are *injective, surjective* or both.

(1) $f : \mathbb{Z} \to \mathbb{Z} : n \mapsto 10n$

(2) $f : \mathbb{Z} \times \mathbb{Z} \to \mathbb{Z} : (m, n) \mapsto m + n$

(3) $f : \mathbb{Z} \times \mathbb{Z} \to \mathbb{Z} \times \mathbb{Z} : (m, n) \mapsto (3m + n, m + n)$