

Types of functions

1. Let f be a function defined as $f: \mathbb{N} \rightarrow \mathbb{N}$ such that $f(x)=x^2$.
 - (i) Is f one-one(yes/no)
 - (ii) Is f onto(yes/no)
2. Let f be a function defined as $f: \mathbb{Z} \rightarrow \mathbb{Z}$ such that $f(x)=x^2$.
 - (i) Is f one-one(yes/no)
 - (ii) Is f onto(yes/no)
3. Let f be a function defined as $f: \mathbb{R} \rightarrow \mathbb{R}$ such that $f(x)=x^2$.
 - (iii) Is f one-one(yes/no)
 - (iv) Is f onto(yes/no)
4. Let f be a function defined as $f: \mathbb{N} \rightarrow \mathbb{N}$ such that $f(x)=x^3$.
 - (v) Is f one-one(yes/no)
 - (vi) Is f onto(yes/no)
5. Let f be a function defined as $f: \mathbb{R} \rightarrow \mathbb{R}$ such that $f(x)=x^3$.
 - (vii) Is f one-one(yes/no)
 - (viii) Is f onto(yes/no)