

# MATH 370 Homework 1

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For every rational number there exists a natural number such that their product is also a natural number

$$\forall p \in \mathbb{Q} \quad \exists k \in \mathbb{N} : pk \in \mathbb{N}$$

For every irrational number there does not exist a natural number such that their product is rational.

$$\forall a \in \mathbb{Q}^c \quad \nexists k \in \mathbb{N} : ak \in \mathbb{N}$$