UNIT 10

Know your English terms well

## Universal quantifier

*“for all”*

For all Real Numbers ∀ x ∈ R

For every Integers ∀ x ∈ Z

For each Elements in a set ∀ x ∈ {1, 2, 3}

## Existential quantifier

“*there exists”*.

There exists Real Numbers ∃ x ∈ R

For some Integers ∃ x ∈ Z

We can find Elements in a set ∃ x ∈ {1, 2, 3}

Negation (assignment 3, question 13)

Negate, ∀x ∈ Z+, [((2x + 1) > 4) ∨ (2x2 ≥ 2)]

∃ x ∈ Z+, [((2x + 1) > 4) ∨ (2x2 ≥ 2)]

∃ x ∈ Z+, [ ((2x + 1) > 4) ⋀ (2x2 ≥ 2)]

∃ x ∈ Z+, [ ((2x + 1) 4) ⋀ (2x2 < 2)]