**Section 1.5 and 1.6**

**Part One**

Define:

* Proposition
* Predicate

**Part Two**

Let P(x) denote the statement “x+2>5” What are the truth values of:

P(4)

P(2)

P(3)

**Part Three**

How would you prove that

∀ x ∈ D, Q(x) is true

∀ x ∈ D, Q(x) is false

∃ x ∈ D, Q(x) is true

∃ x ∈ D, Q(x) is false

**Part Four**

Write down a true universal statement. Define the domain and its truth set.

Write down a false universal statement. Define its domain and its counterexample

Write down a true existential statement. Define the domain and show why it is true

Write down a false existential statement. Define its domain and discuss why it is false (maybe hard to PROVE depending on your domain)