

# Worksheet 4 Review

March 22, 2020

## Question 1

- a.  $\exists n \in \mathbb{N}, n > 3 \wedge n^2 - 1.5n \geq 5$
- b. The variable is existentially quantified
- c. When introduced, the variable's value should be a **concrete natural number**.
- d. Let  $n = 5$ .

Then  $n > 3$ , and

$$n^2 - 1.5n = 25 - 7.5 \tag{1}$$

$$= 17.5 \geq 5 \tag{2}$$

Then, it follows from above that the statement  $\exists n \in \mathbb{N}, n > 3 \wedge n^2 - 1.5n \geq 5$  is true.

## Question 2

## Question 3