Question 1

1.1

1.2

1.3

1.4

1.5

1.6

Question 2

2.1 Every painting is painted by some artist.

2.2 There exists a rich artist who did not paint any painting.

2.3 Vincent likes all paintings painted by himself.

2.4 Every painting is liked by somebody.

2.5 There exists somebody who likes all paintings that they didn’t paint themselves

Question 3

3.1 Neither. is missing one argument.

3.2 Neither. should have a variable.

3.3 Neither. should be used as an argument.

3.4 Neither. should have a constant, not a quantifier as an argument.

3.5 Neither. should not have a predicate symbol as an argument

3.6 Term.

3.7 Wff.

Question 4

4.1

free

bound

free

free

bound

bound

bound

4.2.1

4.2.2

4.2.3

Question 5

The model :

Question 6

The model where the sentence is true:

*is the set of all integers*

: The predicate where is less than

The model where the sentence is false:

*is the set of all integers greater than 0 and less than 10*

: The predicate where is less than

Question 7

*The model :*

*For the satisfaction relation to be satisfied, we need to test that is true for every object in the model .*

*The ordered pairs and*

*The ordered pairs and*

*The ordered pairs and*

*The ordered pairs and*

*The ordered pairs and*

Therefore, the model where satisfies the sentence

Question 8

8.1

The model :

*is the set of all integers*

: The predicate where is divisible by

8.2

The model :

*is the set of all integers*

: The predicate where is divisible by

The predicate where is divisible by

Question 9

9.1

Graphical user interface, application

Description automatically generated

9.2

Graphical user interface, application

Description automatically generated

9.3

A picture containing table

Description automatically generated

9.4

A picture containing graphical user interface

Description automatically generated

9.5

Graphical user interface, application

Description automatically generated