Quiz21

- Due Apr 15 at 12pm
- Points 5
- Questions 5
- Available until Apr 15 at 12pm
- Time Limit 10 Minutes

Attempt History

	Attempt	Time	Score
LATEST	[**Attempt 1**](#)	6 minutes	5 out of 5

⚠ Correct answers will be available on Apr 15 at 12pm.

Score for this quiz: 5 out of 5
Submitted Apr 15 at 10:39am
This attempt took 6 minutes.

⠿

Question 1

1 / 1 pts

Which one is not a syntactically correct FOL statement?

○ $\forall X.\, X < 1 \Rightarrow X < 5$

○ $5 > 7.3$

○ $\exists X.\, Human(X) \Rightarrow iq(X) < 80$

◉ $\forall P \forall X.\, P(X) \vee \neg P(X)$

⠿

Question 2

1 / 1 pts

Which one is not a FOL term?

○ variable Z

○ function f applied on X and Z: f(X,Y)

◉ predicate 45.6 >= 34.5

○ constant 45.6

⠿

Question 3

1 / 1 pts

Which one is the correct translation of the following statement to FOL:

If someone is a student, then that person studies at least 1 hour per week.

○ $\forall X\, \forall Y.\, (student(X) \Rightarrow studyTimePerWeek(X, Y)) \Rightarrow Y \geq 1$

○ $\forall X\, \forall Y.\, student(X) \wedge studyTimePerWeek(X, Y) \Rightarrow Y \geq 1$

◉ $\forall X\, \forall Y.\, student(X) \Rightarrow (studyTimePerWeek(X, Y) \wedge Y \geq 1)$

⠿

Question 4

1 / 1 pts

Which one is not a Horn clause?

○ $student(X) \wedge worksHard(X) \Rightarrow hasBrightFuture(X)$

○ $student(X) \Rightarrow$

◉ $\Rightarrow student(X) \vee \neg student(X)$

○ $student(X) \Rightarrow investsIn(X, future)$

⠿

Question 5

1 / 1 pts

Having the fibonacci function below in Haskell, which one declares it correctly in Horn clause logic?

fib 0 = 0

fib 1 = 1

fib n = fib (n-1) + fib (n-2)

○ $\Rightarrow Fib(0).$
$\Rightarrow Fib(1).$
$Fib(N-1) + Fib(N-2) \Rightarrow Fib(N)$

○ $\Rightarrow Fib(0,0).$
$\Rightarrow Fib(1,1).$
$\Rightarrow Fib(N, Fib(N-1) + Fib(N-2))$

◉ $\Rightarrow Fib(0,0).$
$\Rightarrow Fib(1,1).$
$Fib(N-1,X) \wedge Fib(N-2,Y) \wedge Z = X+Y \Rightarrow Fib(N,Z)$

Quiz Score: 5 out of 5