Started on Thursday, 10 November 2022, 10:50 AM
State Finished
Completed on Thursday, 10 November 2022, 11:00 AM
Time taken 10 mins
Grade **6.40** out of 10.00 (**64**%)

Question 1

Incorrect

Mark 0.00 out of 2.00

Select only **valid** Prolog terms:

Select one or more:

- a. `friend(friend(alice, bob), Charlie)` ✔
- b. `friend(Friend(alice, bob), Friend)` ✖
- c. `Friend(alice, bob)` ✖
- d. `friend(Alice, Bob)` ✔
- e. `friend` ✔
- f. `friend(Friend, Friend)` ✔
- g. `Friend` ✔
- h. `friend('_Friend', 1)` ✔

Your answer is incorrect.

The correct answers are: `friend(Alice, Bob)`, `Friend`, `friend`, `friend(Friend, Friend)`, `friend(friend(alice, bob), Charlie)`, `friend('_Friend', 1)`

Question 2

Partially correct

Mark 2.40 out of 4.00

Match terms that unify in Prolog

friend(bob, Charlie)	friend(alice, Bob) ✖
app(app(f, x), y)	app(F, X) ✔
s(s(X))	s(s(s(z))) ✔
friend(alice, bob)	friend(X, X) ✖
s(s(z),s(z))	s(s(X),Y) ✔

Your answer is partially correct.

You have correctly selected 3.

The correct answer is:

friend(bob, Charlie) → friend(X, X),

app(app(f, x), y) → app(F, X),

s(s(X)) → s(s(s(z))),

friend(alice, bob) → friend(alice, Bob),

s(s(z),s(z)) → s(s(X),Y)

Question **3**

Correct

Mark 4.00 out of 4.00

Consider the following knowledge base in Prolog:

```
unary(z).
unary(s(N)) :- unary(N).

inc(N, s(N)) :- unary(N).
inc(s(N), K) :- inc(N, K).
```

How many answers will the following query provide?

```
?- inc(s(s(s(z))), K)
```

Write `-1` if you think there are infinitely many answers.
Write the finite number greater than or equal to `0`, otherwise.

Answer: 4 ✔

The correct answer is: 4