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Grade 10.00 out of 10.00 (100%)

Question 1

Correct

Mark 4.00 out of 4.00

Match the following queries involving arithmetic with their corresponding solutions.

- ?- _X = 2, _Y = 3, Z = _X+_Y

Z=2+3

✓
- ?- _X = 2, _Y = 3, Z is _X+_Y

Z=5

✓
- ?- _X = 2, _Y = 3, 5 = _X+_Y

false

✓
- ?- length(_L, _X), Z is _X+1

Z=1; Z=2; Z=3; ...

✓
- ?- _X = 2, _Y = 3, 5 is _X+_Y

true

✓
- ?- _X = 2, Z is _X+_Y, _Y = 3

ERROR

✓

Your answer is correct.

The correct answer is: ?- _X = 2, _Y = 3, Z = _X+_Y → Z=2+3, ?- _X = 2, _Y = 3, Z is _X+_Y → Z=5, ?- _X = 2, _Y = 3, 5 = _X+_Y → false, ?- length(_L, _X), Z is _X+1 → Z=1; Z=2; Z=3; ..., ?- _X = 2, _Y = 3, 5 is _X+_Y → true, ?- _X = 2, Z is _X+_Y, _Y = 3 → ERROR

Question 2

Correct

Mark 6.00 out of 6.00

Consider the following predicate:

$$p(X, [X, X|_]).$$
$$p(X, [X, _|T]) :- p(X, [X|T]).$$
$$p(X, [_|T]) :- p(X, T).$$

Which of the following substitutions are valid answers to the query:

?- $p(Y, [a, b, r, a, c, a, d, a, b, r, a])$

Select one or more:

- ☒ a. $Y = b$ ✓
- ☒ b. $Y = r$ ✓
- ☐ c. $true$ (i.e. Y is not instantiated with any term)
- ☐ d. $Y = [r]$
- ☐ e. $Y = [d]$
- ☐ f. $Y = [b]$
- ☐ g. $Y = d$
- ☐ h. $Y = [c]$
- ☐ i. $Y = [a]$
- ☐ j. $Y = c$
- ☒ k. $Y = a$ ✓

Your answer is correct.

The correct answers are: $Y = a$, $Y = b$, $Y = r$