Module4-quiz-SP23

Due Mar 5 at 11:59pm **Points** 10 **Questions** 10
Available until Mar 5 at 11:59pm **Time Limit** None

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	2 minutes	10 out of 10

ⓘ Correct answers will be available on Mar 6 at 3pm.

Score for this quiz: **10** out of 10
Submitted Mar 5 at 4:10pm
This attempt took 2 minutes.

Question 1

1 / 1 pts

How many stable models are there for program containing choice rule: **{p(1..2)}. {q(1..3)}.** ?

- ○ 64
- ◉ 32

The number of stable models generated for $(p_1 \vee \neg p_1) \wedge (p_2 \vee \neg p_2) \wedge .....(p_n \vee \neg p_n)$ is 2^n. So for the program it will be 4 * 8 = 32 stable models.

- 128
- 16

Question 2

1 / 1 pts

Suppose f is a one-to-one function from A to B. If A = {1,2} and B = {a,b,c,d}, how many one-to-one functions are possible?

- 12

In a one-to-one function, for any elements in (x,y) in f and (x1,y) in f, then x = x1. So, the possible one-to-one functions will be 4*3 = 12

- 2
- 4
- 8

Question 3

1 / 1 pts

What will be the value for the aggregate below?

#sum{N*N, N: N = -3....3}.

- 14
- 0
- 28 (selected)

  Since the above sum forms different tuples, the aggregate will be (9+4+1+0+1+4+9) = 28.
- 24

Question 4

1 / 1 pts

Consider the one rule program:

p(M,N) :- N=1..4, N=2*M

How many atoms are in the stable model of this program?

- 1

8

2

the possible atoms are p(1,2) and p(2,4), because 1 and 3 cannot be represented as 2*M where M is an integer

4

Question 5

1 / 1 pts

How many stable models are possible for this choice rule:

{p(1..3)}. {q(1..3)}.

8

64

16

32

Question 6

1 / 1 pts

How many stable models for this rule:

2 {p(1..3)} 3

- 1
- 2
- 8
- 4

Answer: 1
p(2) p(3)
Answer: 2
p(1) p(2) p(3)
Answer: 3
p(1) p(3)
Answer: 4
p(1) p(2)

Question 7

1 / 1 pts

Find the stable model(s) of the following clingo program.

0{p(a)}1.

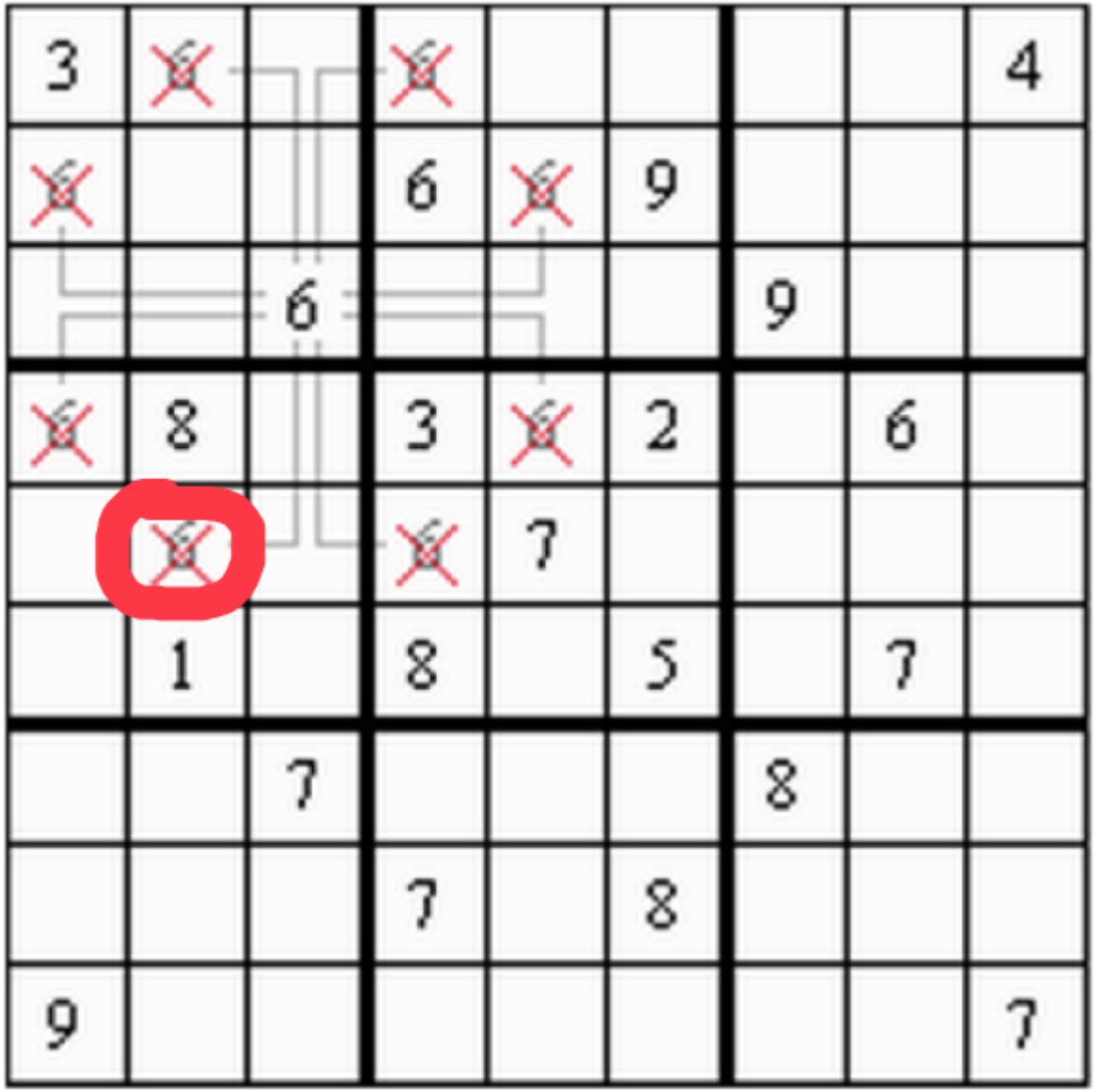
q(X) :- p(X).

- ø and {p(a), q(a)}
- {q(a)}
- ø
- ø, {p(a)}, {q(a)}, and {p(a), q(a)}

Question 8

1 / 1 pts

In Anti-Knight Sudoku, cells that are a chess knight’s move away from each other cannot hold equal values. Given that position (3,3) is 6, which option weeds out the possibility of 6 being at position (5,2) highlighted by the red circle?



:- a(R,C,N), a(R-1,C-2,N).

:- a(R,C,N), a(R+2,C-1,N).

:- a(R,C,N), a(R+1,C-2,N).

:- a(R,C,N), a(R-2,C-1,N).

Question 9

1 / 1 pts

Which option is the stable model of the following program?

p(a,1). p(b,1). p(c,2). p(a,2).

s(N) :- N = #count{X : p(A,X)}.

{p(a,1), p(b,1), p(c,2), p(a,2), s(6)}

{p(a,1), p(b,1), p(c,2), p(a,2), s(4)}

{p(a,1), p(b,1), p(c,2), p(a,2), s(2)}

{p(a,1), p(b,1), p(c,2), p(a,2), s(0)}

Question 10

1 / 1 pts

Which option is the stable model(s) of the following program?

{p(X): X=1..3}.

:- 1{p(1); p(3)}.

:- not p(1), not p(2).

- {p(2)}
- {p(1), p(3)} and {p(1), p(2), p(3)}
- ø and {p(2)}
- {p(1)}, {p(1), p(2)}, {p(1), p(3)}, {p(1), p(2), p(3)}, and {p(2), p(3)}

Quiz Score: **10** out of 10