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Answer A.

[X, Y | Z] and [a, b, c | [d, e, Y]]

Yes, they match with:-
Y = b
X = a
Z = [c, d, e, b]

Explaination :-
[a, b, c | [d, e, Y]]
-> [a, b, c, d, e, Y]
-> [a, b | [c, d, e, Y]] = [X, Y | Z]

Answer B.

[q, [A | [r, s]], t] and [q, [r, [r, s]] | B]

No, they would not match.

Explaination :-
[q, [A | [r, s]], t]
-> [q, [A, r, s], t]
-> [q, [A, r, s] | [t]] which is not equal to [q, [r, [r, s]] | B]

Answer C.

[[Cow | [cat, dog]], bird, bug, chicken] and [[ant, [cat, dog]] | Horse]

Explaination :-
Simplifying [[Cow|[cat, dog]], bird, bug, chicken]
-> [[Cow, cat, dog], bird, bug, chicken]
-> [[Cow, cat, dog]|[bird, bug, chicken]]

Hence since the first array has does not have [cat, dog] element, its not equal.

Answer D.

[1, A, 2 | [A, 3, 4]] and [B | [2, C | [D | E]]]

Yes they are equal. A = 2 B = 1 C = 2 D = 2 E = [3, 4]

Explaination :-
[1, A, 2 | [A, 3, 4]]

-> [1, A, 2, A, 3, 4]
-> [1, A, 2, A | [3, 4]]
-> [1, A, 2, [A | [3, 4]]]
-> [1 | [A, 2, [A | [3, 4]]]]

Hence it compares to the form of [B | [2, C | [D | E]]]

Answer E.

[A | [A | [[A | [[A]]]]]] and [b | C]

Yes, they are equal. A = b C = [b, [b, [b]]]

Answer F.

[X | [Y | [Z | [X]]]] and [all, around, the, world, Y]

No, they are not equal.

Explaination :-
Simplifying [X | [Y | [Z | [X]]]]
-> [X | [Y | [Z, X]]]
-> [X | [Y , Z, X]]. -> [X, Y, Z, X].

Comparing it with [all, around, the world, Y], clearly signifies that they are not equal.

Answer G.

Yes, this would work with the following variable bindings:

- X = []
- Y = []
- Z = [[[]]]
- Q = 1
- R = 2
- S = []

Simplifying the lists:

1. Simplifying `[1, 2 | [ X | [ Y, Z | X] ] ]`: -> [1, 2 | [[] | [[], [[[]]] | []]]]
   -> [1, 2, [] | [[], [[[]]] | []]]
   -> [1, 2, [], [] | [[[[]]] | []]]
   -> [1, 2, [], [], [[[]]] | []]
   -> [1, 2, [], [], [[[]]], []]
2. Simplifying `[Q | [R, S, [], [[Y]]]]`: -> [1 | [2, [], [], [[[]]]]]
   -> [1, 2 | [[], [], [[[]]]]]
   -> [1, 2, [] | [[], [[[]]]]]

-> [1, 2, [], [] | [[[[]]]]]
-> [1, 2, [], [], [[[]]]]

Answer H.

[Lions, [[and], tigers], [and], bears, oh | [[my]]] and [[I, have], [[A], Bad], Feeling | [About | This]]

Yes, they would be equal. Lions = [I, have] I = I A = and Bad = tigers Feeling = [and] About = bears This = [oh, [my]]

Simplifying the lists:

1. Simplifying `[Lions, [[and], tigers], [and], bears, oh | [[my]]]`:
   -> [Lions | [[[and], tigers], [and], bears, oh | [[my]]]]
   -> [Lions, [[and], tigers] | [[and], bears, oh | [[my]]]]
   -> [Lions, [[and], tigers], [and] | [bears, oh | [[my]]]]
   -> [Lions, [[and], tigers], [and], bears | [oh | [[my]]]]
   -> [Lions, [[and], tigers], [and], bears, oh | [[my]]]
2. Simplifying `[[I, have], [[A], Bad], Feeling | [About | This]]`: -> [[I, have] | [[[A], Bad], Feeling | [About | This]]]
   -> [[I, have], [[A], Bad] | [Feeling, About | [This]]]
   -> [[I, have], [[A], Bad], Feeling | [About | [This]]]
   -> [[I, have], [[A], Bad], Feeling, About | [This]]
   -> [[I, have], [[A], Bad], Feeling, About, This]

Hence the two forms are equal.