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1. [W, X, Y | Z] and [1, 2, 3, 4, 5 | [6, 7, X] ]

Matches if

W = 1

X = 2

Y = 3

Z = [4, 5 | [6, 7, 2]]

List 1 = [W, X, Y | Z]

Substitute values:

* [1, 2, 3 | [4, 5 | [6, 7, 2]]]

Rearranging list:

* [1, 2, 3, 4, 5 | [6, 7, 2]]
* [1, 2, 3, 4, 5, 6, 7, 2]

List 2 = [1, 2, 3, 4, 5 | [6, 7, X]]

Substitute values:

* [1, 2, 3, 4, 5 | [6, 7, 2]]

Simplify:

* [1, 2, 3, 4, 5, 6, 7, 2]

[1, 2, 3, 4, 5, 6, 7, 2] = [1, 2, 3, 4, 5, 6, 7, 2]

Therefore List1 = List2 when W = 1, X = 2, Y = 3, Z = [4, 5 | [6, 7, 2]]

1. [p | [q | [ r | [s | [ t | [V] ] ] ] ] ] and [X, Y| Z]

Matches if

X = p

Y = q

Z = [r, s, t, V]

List1 = [p | [q | [ r | [s | [ t | [V] ] ] ] ] ]

Rearranging list:

* [p, q, r, s, t, V]

List2 =[X, Y| Z]

Substitute values:

* [p, q | [r, s, t, V]]

Simplify list:

* [p, q, r, s, t, V]

[p, q, r, s, t, V] = [p, q, r, s, t, V]

Therefore, List1 = List2 when X = p, Y = q, Z = [r, s, t, V]

1. [ [Z | [x, y] ], e, f, g ] and [ [a, [x, y] ] | V]

List1 = [ [Z | [x, y] ], e, f, g ]

Rearranging:

* [[Z | [x, y]] | [e, f, g]
* [[Z, x, y] | e, f, g]

List2 = [ [a, [x, y] ] | V]

These lists do not match. In list 1, [Z | [x, y]] = [Z, x, y] which has 3 elements, whereas in list 2, [a, [x, y]] only has two elements. Also, the values x,y are separate elements in list1, while they are a sub-list [x, y] in list2.

1. [ [a], B, C | D] and [ [a | [B] ] | [C | D] ]

List1 = [ [a], B, C | D]

List2 = [ [a | [B] ] | [C | D] ]

Rearranging:

* [[a, B] | [C | D]]

[a], B != [a, B] therefore List1 and List2 do not match. In List1, the elements [a], and B are two separate members of the parent list. However in List2, [a, B] are grouped together as a sub-list as one member of the parent list.

1. [minus | [Y, X | [ minus, Y | [X] ] ] ] and [X, plus, minus | [X, Y, minus] ]

List1 = [minus | [Y, X | [ minus, Y | [X] ] ] ]

Simplifying:

* [minus | [Y, X | [minus, Y, X]]
* [minus | [Y, X, minus, Y, X]]
* [minus, Y, X, minus, Y, X]

List2 = [X, plus, minus | [X, Y, minus] ]

Simplifying:

* [X, plus, minus, X, Y, minus]

Matches if

X = minus

Y = plus

Substituting values in List1:

[minus, plus, minus, minus, plus, minus]

Substituting values in List2:

[minus, plus, minus, minus, plus, minus]

[minus, plus, minus, minus, plus, minus] = [minus, plus, minus, minus, plus, minus]

Therefore, List1 = List2 when X = minus, and Y = plus.

1. [bike | A] and [C | [C | [C | [C | [C] ] ] ] ]

List1 = [bike | A]

List2 = [C | [C | [C | [C | [C] ] ] ] ]

Simplifying

= [C | [C | [C | [C, C ] ] ] ]

= [C | [C | [C, C, C ] ] ]

= [C | [C, C, C, C]]

Matches if

C = bike

A = [bike, bike, bike, bike]

Substituting values in List1:

[bike | [bike, bike, bike, bike]]

Substituting values in List2:

[bike | [bike, bike, bike, bike]

[bike | [bike, bike, bike, bike] = [bike | [bike, bike, bike, bike]

Therefore, List1 = List2 when C = bike and A = [bike, bike, bike, bike]

1. [a, b | [ C | [ D, E | C] ] ] and [F | [G, H, [], [ [D] ] ] ]

List1 = [a, b | [ C | [ D, E | C] ] ]

Simplifying:

* [a, b, | [C, D, E | C]]
* [a, b, C, D, E | C]

List2 = [F | [G, H, [], [ [D] ] ] ]

Rearranging:

* [F, G, H, [], [[D]]]

Matches if

F = a

G = b

H = []

C = []

D = []

E = [[[]]]

Substituting values in List1:

[a, b, [], [], [[[]]] | []]

Simplifying:

* [a, b, [], [], [[[]]]]

Substituting values in List2:

[a, b, [], [], [[[]]]]

[a, b, [], [], [[[]]]] = [a, b, [], [], [[[]]]

Therefore List1 = List2 when F = a, G = b, H = [], C = [], D = [], E = [[[]]].

1. [Fox, [[in], socks], [on], box, on | [[knox]] ] and [[The, cat], [[in], The], Hat | [Comes | Back] ]

List1 = [Fox, [[in], socks], [on], box, on | [[knox]] ]

Simplifying:

* [Fox, [[in], socks], [on], box, on, [knox]]

List2 = [[The, cat], [[in], The], Hat | [Comes | Back] ]

Simplifying:

* [[The, cat], [[in], The], Hat, Comes | Back]

Matches if

Fox = [socks, cat]

The = socks

Hat = [on]

Comes = box

Back = [on, [knox]]

Substituting values into List1:

[[socks, cat], [[in], socks], [on], box, on, [knox]]

Substituting values into List2:

[[socks, cat], [[in], socks], [on], box | [on, [knox]]]

Simplifying:

* [[socks, cat], [[in], socks], [on], box on, [knox]]

[[socks, cat], [[in], socks], [on], box on, [knox]] = [[socks, cat], [[in], socks], [on], box on, [knox]].

Therefore List1 = List2 when Fox = [socks, cat], The = socks, Hat = [on], Comes = box, Back = [on, [knox]].