1.

a. Does not match.
X = a, Y = b, Z = c, [d,e,Y] cannot match to anything

b. Does not Match.
[q, [A | [r, s]], t] and [q, [r, [r, s]] | B]
q = q, [A | [r, s]] = [r,[r,s]] ? simplify [A | [r,s]] to [A, r, s] != [r, [r,s]] because they are not the same structure

c. Does not match.
[[Cow | [cat, dog]], bird, bug, chicken] and [[ant, [cat, dog]] | Horse]
[Cow | [cat, dog]] = [ant, [cat, dog]] ? simplify : [Cow, cat, dog] = [ant, [cat, dog]] ? Does not match because they are not the same structure.

d. Match.
[1, A, 2 | [A, 3, 4]] and [B | [2, C | [D | E]]]
[1, A, 2, A, 3, 4] and [B | [2, C, D| E]]
[1, A, 2, A, 3, 4] and [B, 2, C, D | E]
B = 1, A = 2, C = 2, D = A = 2, E = [3,4]

e. Match
[A | [A | [[A | [[A]]]]]] and [b | C]
lets simplify [A | [A | [[A | [[A]]]]]] first:
[A, A | [[A | [[A]]]]], [A, A, [A | [[A]]]],
[A, A, [A, [A]]] and [b | C]
A = b, then
[A, [A, [A]]] = C ? Yes, it should match because C can match into anything

f. Does not match
[X | [Y | [Z | [X]]]] and [all, around, the, world, Y]
[X, Y | [Z | [X]]], [X, Y, Z | [X]], [X, Y ,Z, X]
[X,Y,Z,X] and [all, around, the ,world, Y]
X = all, Y = around, Z = the X = world, Y = ? Does not Match.

g. Match
[1, 2 | [X | [Y, Z | X]]] and [Q | [R, S, [], [[Y]]]]
[1, 2, X | [Y, Z | X]] and [Q, R, S, [] | [[Y]]]
[1, 2, X, Y, Z | X] and [Q, R, S, [], [Y]]
Q = 1, R = 2, X = S, Y = [], Z = [Y], X = []

h. Match
[Lions, [[and], tigers], [and], bears, oh | [[my]]] and [[I, have], [[A], Bad], Feeling | [About | This]]
Lets go through the first one: [Lions, [[and], tigers], [and], bears, oh | [[my]]]
[Lions, [[and], tigers], [and], bears, oh, [my]]. Lets go through the second one : [[I, have], [[A], Bad], Feeling | [About | This]]
[[I, have], [[A], Bad], Feeling, About | This]. Matching time!
[Lions, [[and], tigers], [and], bears, oh, [my]] and [[I, have], [[A], Bad], Feeling, About | This]
Lions = [I, have], [[and], tigers] = [[A], Bad] ? A = and, Bad = tigers, Feeling = [and], About = bears, This = [oh, [my]]