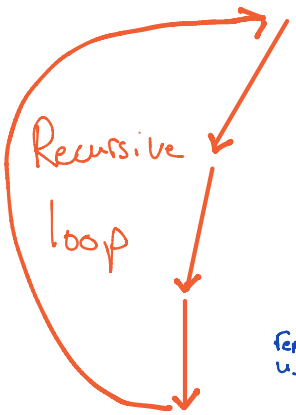
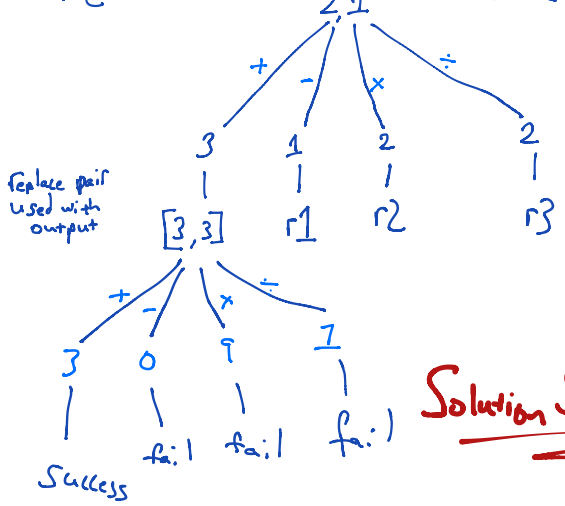


Input list: [1, 2, 3] n choose 2: $\frac{n(n-1)}{2}$ len = 3

target = 3

nC2 nodes

Pair 2 Pair 3



× 3C2

× 4

len = 2

× 4

If output = target:
  yield success
else:
  yield fail

Solution Space Size: $nC2 \times 4 \times (n-1)C2 \times 4 \dots 2C2 \times 4$

$\frac{n \cdot n-1}{2} \times 4 \times \frac{n-1 \cdot n-2}{2} \times 4 \dots \times \frac{2 \times 1}{2} \times 4$

$\frac{n \cdot (n-1)!^2}{2^{n-1}} \times 4^{n-1}$ ∴ $\frac{6 \cdot (5!)^2 \cdot 4^5}{2^5} = 2,764,800$