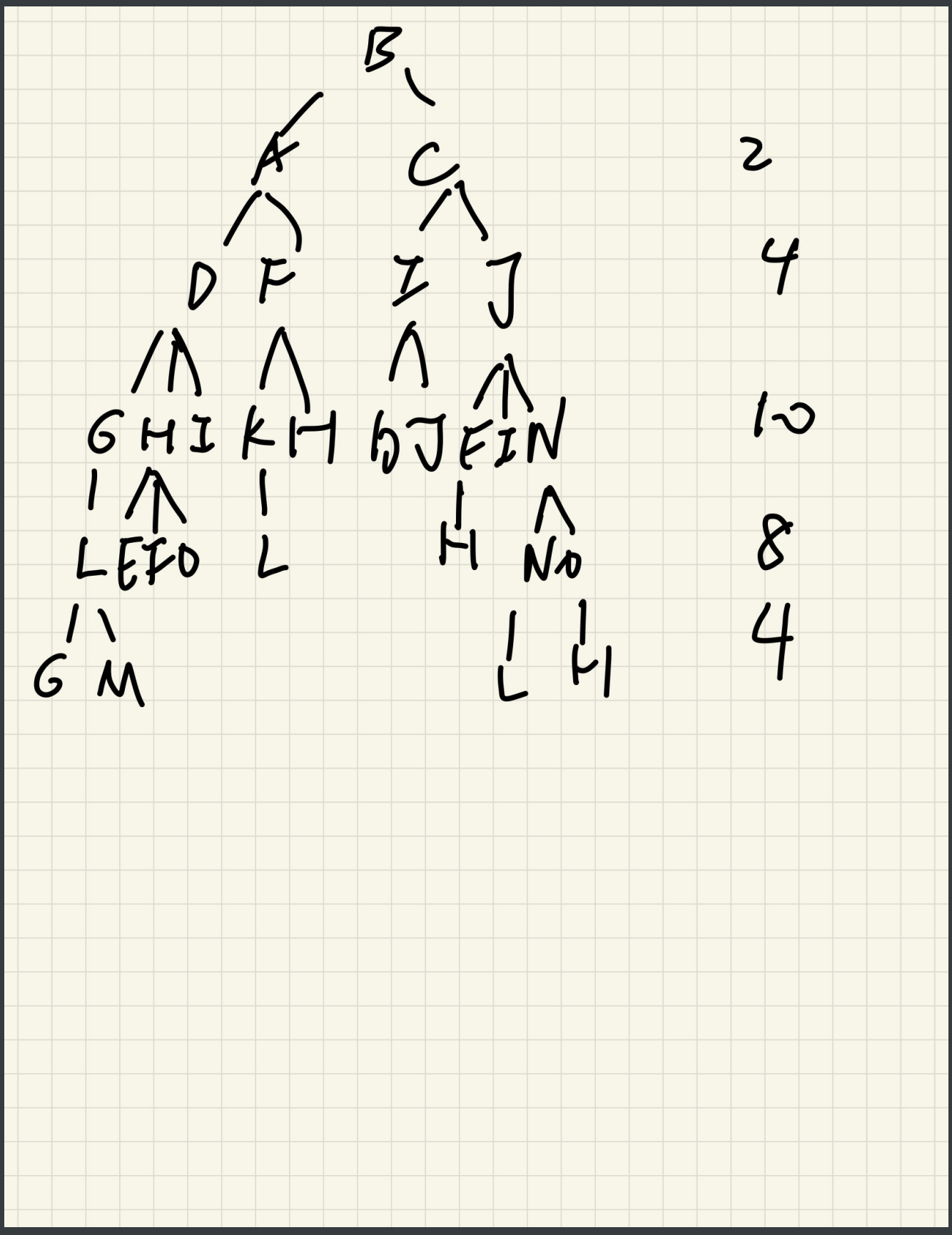
1. All packets pass without error = $0.8^{10} \approx 0.107$
   $\Sigma_{n=0}^{\infty} np(1-p)^{n-1} = \frac{1}{p} = \frac{1}{0.107} \approx 9.12$
2. A FLAG A B A FLAG FLAG C B FLAG ESC FLAG FLAG
3. 011110111110011111010
4. Yes, if the packet is currupt between two devices like being interfered by noises and didn't notice by the error detection mechanism like checksum or CRC.
5. From C through B:
   $C \to B + B(5, 0, 8, 12, 6, 2) = B(11, 6, 14, 18, 12, 8)$
   $C \to D + D(16, 12, 6, 0, 9, 10) = D(19, 15, 9, 3, 12, 13)$
   $C \to E + E(7, 6, 3, 9, 0, 4) = E(12, 11, 8, 14, 5, 9)$
   $minCost = (11, 6, 0, 3, 5, 8)$
   $from = (B, B, C, D, E, B)$
6. Assume we have a cluster, b region, r routers in the region $a * b * r = 4800$,
   $min((a-1) + (b-1) + r) = min(a + b + r - 2)$
   a = 15 b = 16 r = 20
7.

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b has 14 edges = 14

8. No change in sink tree means F->G is the terminate edge in the RPF, so the change in the RPF is to make connection on the circled F with G and on the circled G with F.