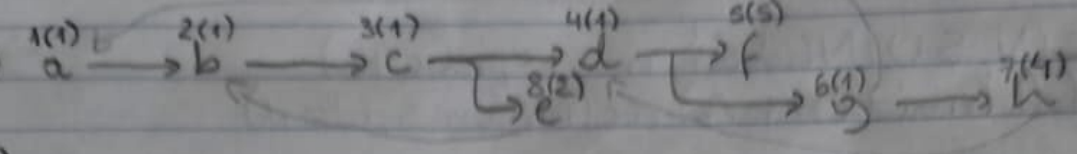
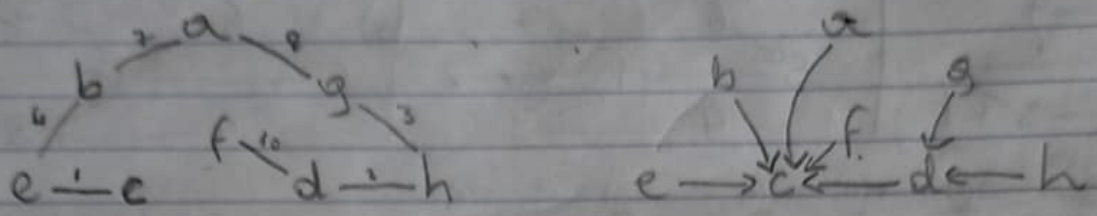
EN19

1 $a=1, b=2, c=0$ $\log_2 1 = 0 \longrightarrow O(\log n)$

2 a) 

AP: d (low(f) > dfs(d))

b)



3 a) Func path(G, vis, node, target, len):
    if node = target: max_len = max(max_len, len)
    else:
        for (node, v) in G:
            vis[v] = True
            path(G, vis, v, target, len+1)
            vis[v] = False

b) É mostrar que, p.e., o caminho mais longo de s a e é (s, a, b, c, f, d), que não está incluído em S.

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4 a) func TD(p, i, j):
    if dp[i, j] has a value: return dp[i, j]
    if i = j: dp[i, j] = 0
    else:
        dp[i, j] = +∞
        for k = i → j − 1:
            dp[i, j] = min(dp[i, j], TD(p, i, k) + TD(p, k+1, j) + p[i, k, j])
    return dp[i, j]

b) func BU(p, a, b):
    for k = 1 → n: dp[k, k] = 0
    for j = 2 → n: for i = j − 1 → 1:
        dp[i, j] = +∞
        for k = i → j − 1:
            dp[i, j] = ...
    return dp[a, b]