

1.

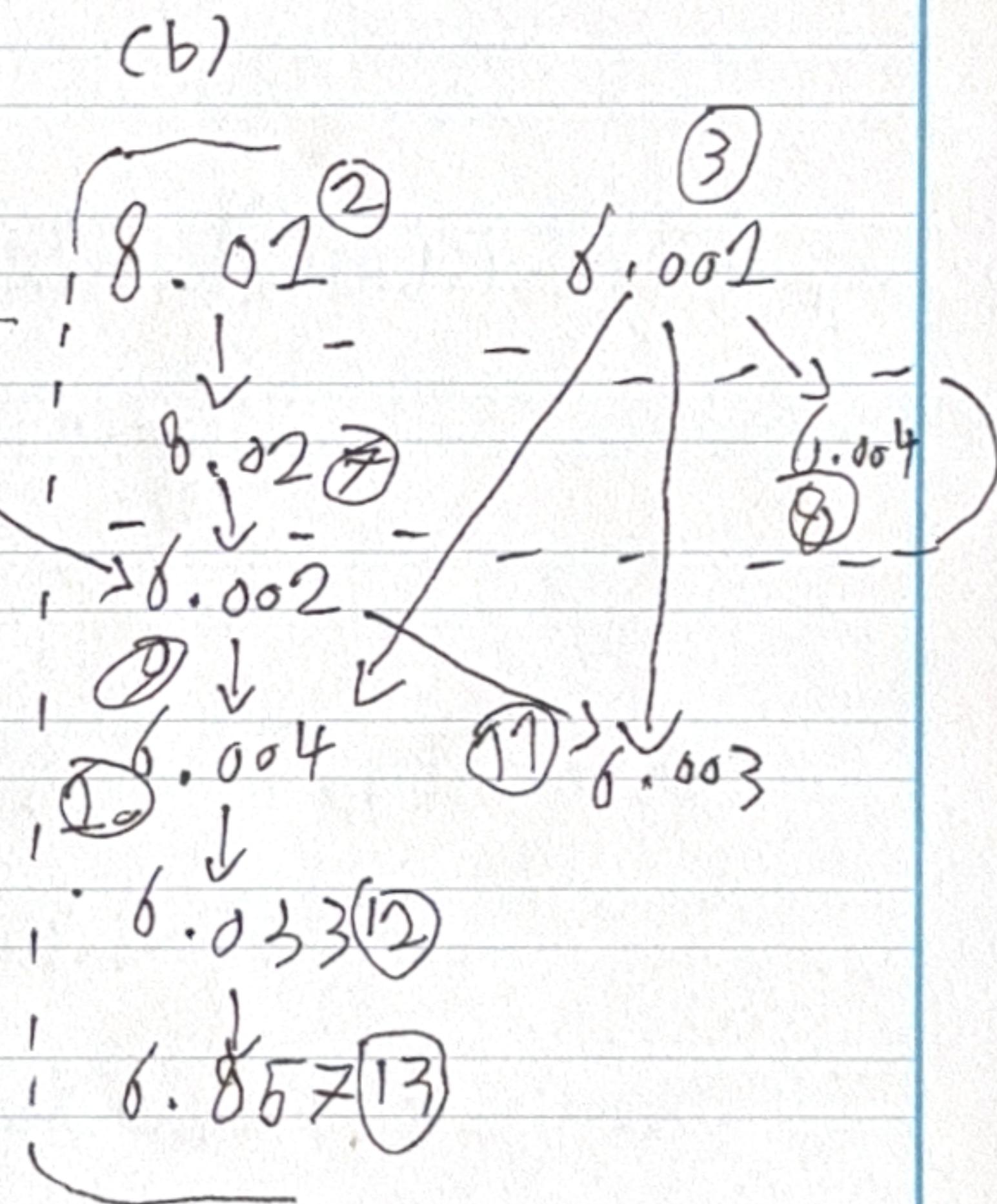
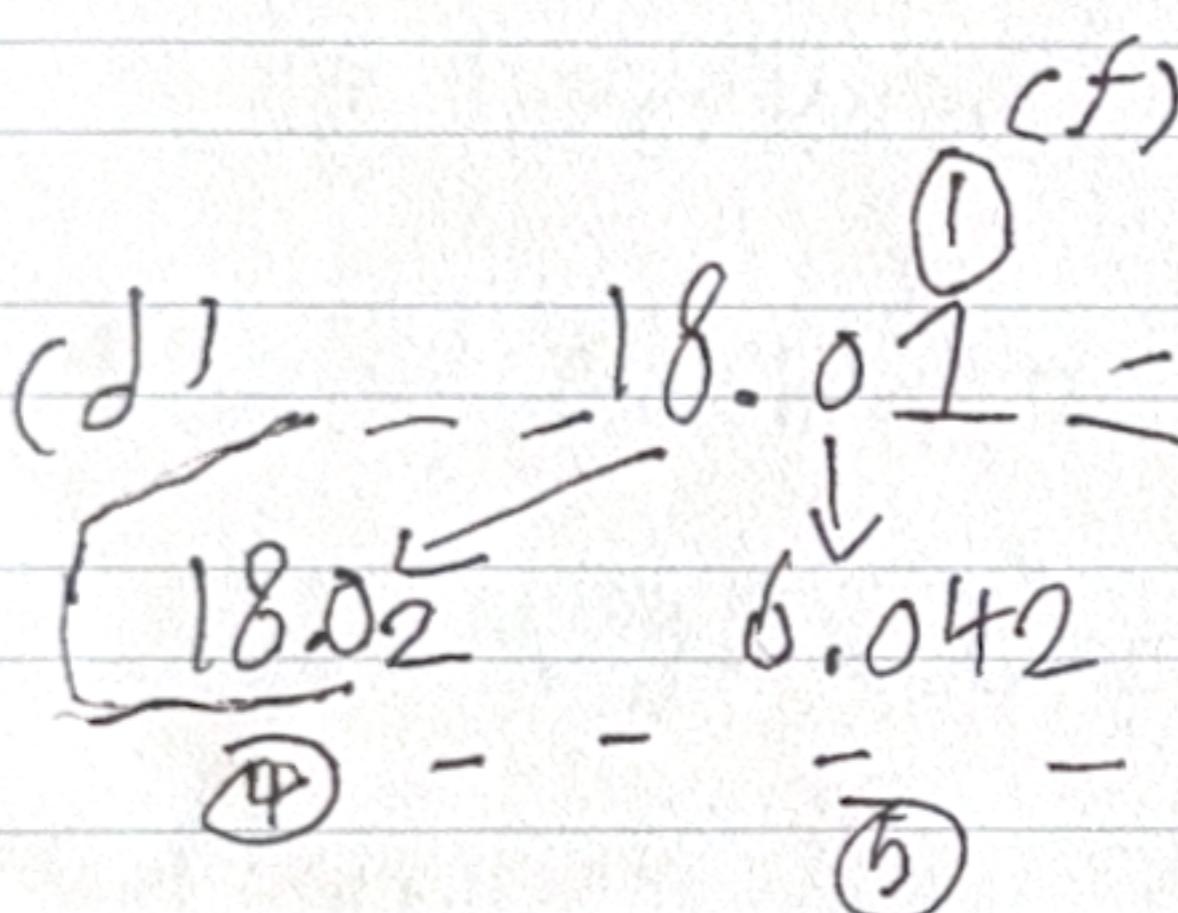
(a) α each class has remainder $i \bmod 3$ $0 \leq i \leq 2$

(b) $k \leq a, \sum k+1 \quad k \in \mathbb{Z}^+ \cup \{0\}$

2. (a) Symmetry

(b) Symmetry

3. (a)



(c) 6

(b) 18 (e) 5

(SF) (9) ~~14~~ 15 8

(h) ~~5~~ 6

(i) length of longest chain, length of top sort ✓