

# Quiz 11 MTH450/550

Sunday, November 12, 2023

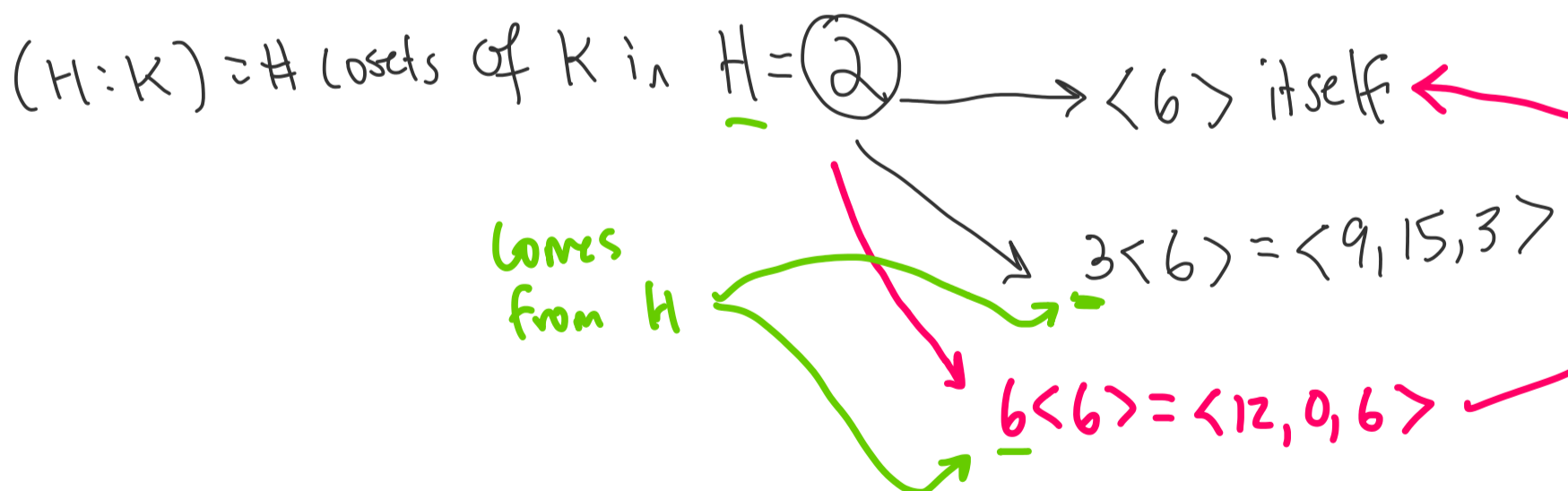
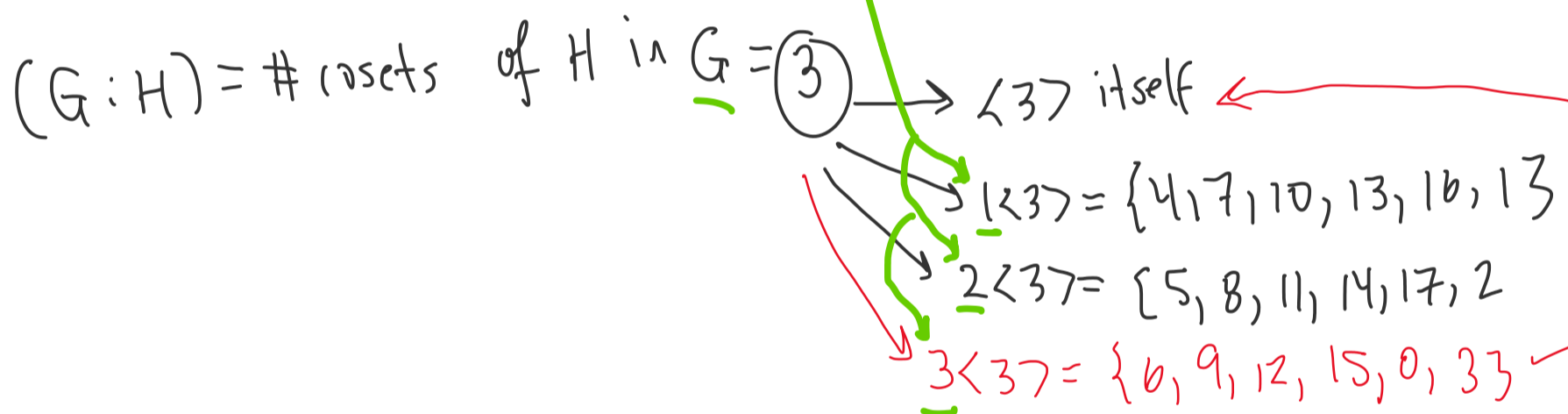
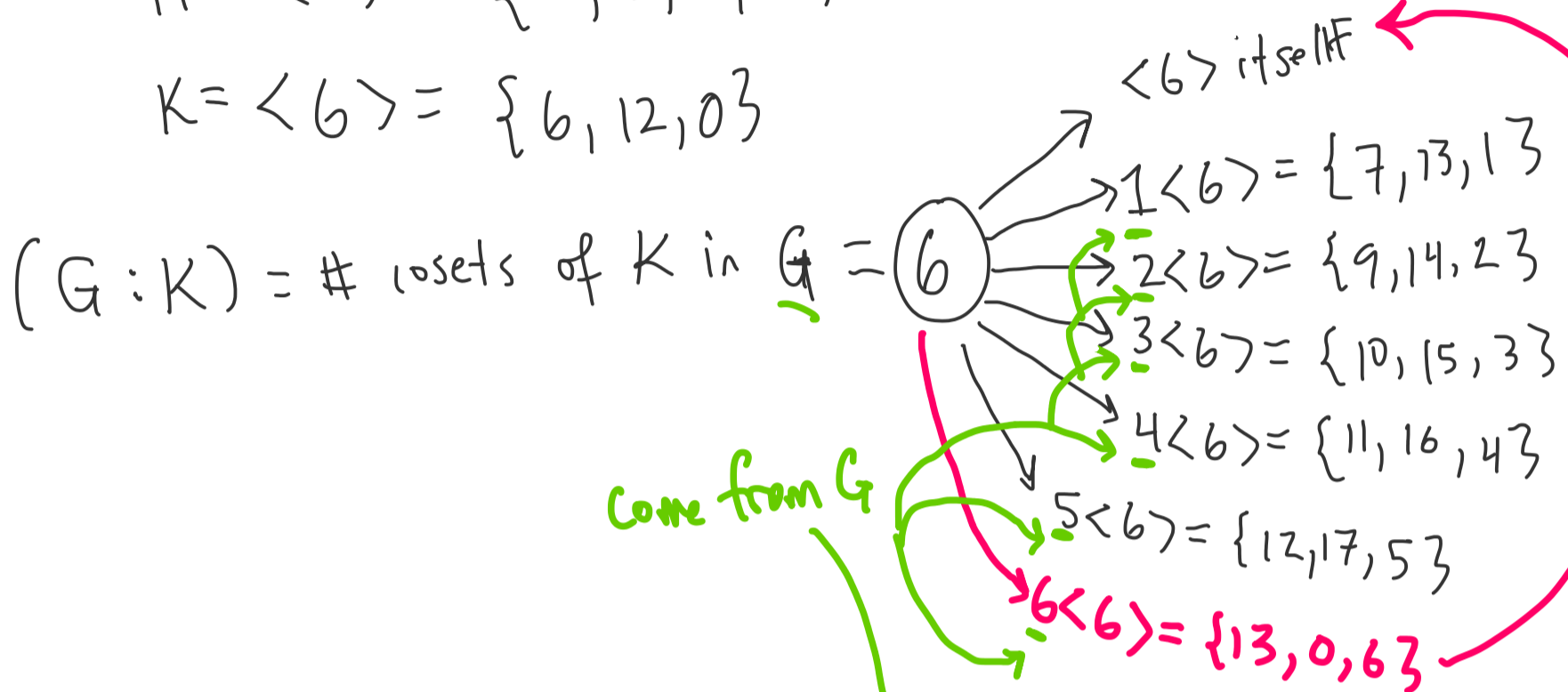
8:56 AM

$$G = \mathbb{Z}_{18}, H = \langle 3 \rangle, K = \langle 6 \rangle$$

First,

$$H = \langle 3 \rangle = \{3, 6, 9, 12, 15, 0\}$$

$$K = \langle 6 \rangle = \{6, 12, 0\}$$



Thm 10.14

$$(G:K) = (G:H)(H:K)$$

Is it true?

$$6 = 3 \cdot 2 \quad \text{yes!}$$