

CSC 2259

"beers & odd
went over quick

2/27/20

+ more set theory

$$1 \cdot 4^{n-1} + 2 \cdot 3 \cdot 4^{n-2} + 3 \cdot 3^2 \cdot 4^{n-3} + \dots + n \cdot 3^{n-1} + n \cdot 3^n$$

$$4^{n-1} \cdot 4^2 \left(1 - \left(\frac{3}{4}\right)^n\right) \quad \text{total \# of iterations}$$

if no
values given,
provide your
own

$$\text{avg \#} = \frac{4^{n+1} \left(1 - \left(\frac{3}{4}\right)^n\right)}{4^n}$$

$$= 4 \left(1 - \left(\frac{3}{4}\right)^n\right)$$

subset $(H, W) \leftrightarrow H \subseteq W$
 subset $(W, H) \leftrightarrow W \subseteq H$ } 2 iterations
 $H = W$, two iterations



$$|A \cup B \cup C| = |A| + |B| + |C|$$

$$|A \cap B| = |A \cap C| + |B \cap C|$$

$$+ |A \cap B \cap C|$$

$$|A \cup B \cup C| = |A \cap B \cap C|$$

$$(|A| + |B| - 3|A \cap B| - |A \cap C| - |B \cap C|)$$