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HW 12
5.26, 5.28

5.26) $x_1 = x_2$, $x_2 = x_3$, $x_1 \neq x_3$

Set each variable to false — O(1)
Set one variable to true, [illegible] — O(1)

while variables are changed
if an equality is false, change other variable to true

check all inequalities, if any are false, then it is not a satisfyable condition

This algorithm runs $O(n^2)$, because each time we check every condition, and at worst we are changing n variables, so we end up a $O(n^2)$ algorithm, we then check all the inequalities, which is $O(m)$ worst case, so [illegible] is our algorithm, which simplifies to $O(n^2)$

5.27) Starting set = {x} of all people
while a person in {x} knows < 5 people or more than n-5
remove that person from {x}

This algorithm runs in $O(n^2)$, because each iteration takes $O(n)$ time as it needs to scan the whole set each iteration to check any changes that were made, and could invalidate the set