

$$\neg(a \vee b) \vee ((\neg d \vee e) \wedge f)$$

$$(\neg a \wedge \neg b) \vee ((\neg d \vee e) \wedge f)$$

$$A \vee (Q \wedge R)$$

$$(A \vee Q) \wedge (A \vee R)$$

$$\underbrace{((\underbrace{\neg a \wedge \neg b}_Q \wedge \underbrace{\neg d \vee e}_R))}_{A} \wedge \underbrace{((\neg a \wedge \neg b) \vee f)}_{(\neg a \vee f) \wedge (\neg b \vee f)}$$

$$(Q \wedge R) \vee A$$

$$(Q \vee A) \wedge (R \vee A)$$

$$(\neg a \vee (\neg d \vee e)) \wedge (\neg b \vee (\neg d \vee e))$$

$$(\neg a \vee \neg d \vee e) \wedge (\neg b \vee \neg d \vee e)$$

3SAT

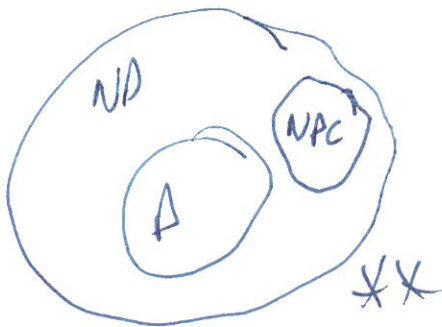
1)  $\neg a \vee \neg d \vee e$

2)  $\neg b \vee \neg d \vee e$

3)  $\neg a \vee f \vee \neg a$

4)  $\neg b \vee f \vee f$

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# DIAGONALIZATION PROOF

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proof by contradiction

assume \_\_\_\_\_ is countable

