

# Review for Test 2:

Tuesday, October 8, 2019 11:00 AM

simplify using the laws of logic:

$$(\bar{A} + \bar{B}) \overline{A+C}$$

method #1

$$(\bar{A} + \bar{B}) \bar{A} \bar{C}$$

DeMorgan's

$$\left[ \begin{array}{l} \text{absorption } A(A+B) = A \\ \bar{A}(\bar{A} + \bar{B}) = \bar{A} \end{array} \right.$$

$$\bar{A} \bar{C} \quad \text{absorption}$$

method #2:

$$(\bar{A} + \bar{B}) \overline{A+C}$$

$$(\bar{A} + \bar{B}) \bar{A} \bar{C}$$

DeMorgan's

$$\bar{A} \bar{A} \bar{C} + \bar{B} \bar{A} \bar{C}$$

distributive

$$\bar{A} \bar{C} + \bar{B} \bar{A} \bar{C}$$

idempotent

$$\bar{A} \bar{C} (1 + \bar{B})$$

distributive

$$\bar{A} \bar{C} \cdot 1$$

identity

$$\bar{A} \bar{C}$$

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method

$$(\bar{A} + \bar{B}) \overline{A+C}$$

$$\overline{AB} \quad \overline{A+C}$$

DeMorgan's

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$$AB + A+C$$

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either  $\begin{cases} \overline{A+C} \\ \overline{A} \overline{C} \end{cases}$  absorption  
De Morgan's

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simplify

$$(p \wedge (p \vee \bar{a})) \vee (\bar{p} \vee (p \wedge q))$$

$$p \vee (\bar{p} \vee q)$$

$$1 \vee q$$

$$1$$

absorption

complement

identity