

Break & Quiz

Q 1.1: Suppose P is false, Q is true, and R is true. Does this assignment satisfy

- (i) $\neg(\neg p \rightarrow \neg q) \wedge r$
- (ii) $(\neg p \vee \neg q) \rightarrow (p \vee \neg r)$

- A. Both
- B. Neither
- C. Just (i)
- D. Just (ii)

Break & Quiz

Q 1.2: Let A = “Aldo is Italian” and B = “Bob is English”. Formalize “Aldo is Italian or if Aldo isn’t Italian then Bob is English”.

- a. $A \vee (\neg A \rightarrow B)$
- b. $A \vee B$
- c. $A \vee (A \rightarrow B)$
- d. $A \rightarrow B$

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Q 1.3: How many different assignments can there be to
 $(x_1 \wedge y_1) \vee (x_2 \wedge y_2) \vee \dots \vee (x_n \wedge y_n)$

- A. 2
- B. 2^n
- C. 2^{2n}
- D. $2n$

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Q 2.1: What is the CNF for $(\neg p \wedge \neg(p \Rightarrow q))$

- A. $(\neg p \wedge \neg(p \Rightarrow q))$
- B. $(\neg p) \wedge (\neg p \vee \neg q)$
- C. $(\neg p \vee q) \wedge (p \vee \neg q) \wedge (p \vee q)$
- D. $(\neg p \vee \neg q) \wedge (\neg p \vee q) \wedge (p \vee \neg q) \wedge (p \vee q)$

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Q 2.2: Which has more rows: a truth table on n symbols, or a joint distribution table on n binary random variables?

- A. Truth table
- B. Distribution
- C. Same size
- D. It depends