

1. Which of the following is not a valid proof technique?
 - A. Induction
 - B. Case analysis
 - C. Proof by contradiction
 - D. Proof by construction
2. Which of the following is not a valid proof by contradiction?
 - A. Assume P is false and show that this leads to a contradiction.
 - B. Assume P is true and show that this leads to a contradiction.
 - C. Assume not P is false and show that this leads to a contradiction.
 - D. Assume not P is true and show that this leads to a contradiction.
3. Which of the following is not a valid proof by construction?
 - A. Show that there exists an object with the desired property.
 - B. Show that there does not exist an object with the desired property.
 - C. Show that there exists a unique object with the desired property.
 - D. Show that there does not exist a unique object with the desired property.
4. Which of the following is not a valid proof by induction?
 - A. Show that the statement is true for the base case.
 - B. Show that the statement is true for the inductive case.
 - C. Show that the statement is false for the base case.
 - D. Show that the statement is false for the inductive case.
5. Which of the following is not a valid proof by case analysis?
 - A. Show that the statement is true for Case 1.
 - B. Show that the statement is true for Case 2.
 - C. Show that the statement is false for Case 1.
 - D. Show that the statement is false for Case 2.

Answer Key: 1. D, 2. B, 3. B, 4. C, 5. C