

NAME: _____

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Feedback #1 Logic

Evaluate each of the 10 statements as to its truth or falsity:

1. Exactly one statement on this list is false.
2. Exactly two statements on this list are false.
3. Exactly three statements on this list are false.
4. Exactly four statements on this list are false.
5. Exactly five statements on this list are false.
6. Exactly six statements on this list are false.
7. Exactly seven statements on this list are false.
8. Exactly eight statements on this list are false.
9. Exactly nine statements on this list are false.
10. Exactly ten statements on this list are false.

Solution. Each pair of statements in the list forms a contradiction; therefore at most one statement is true. At this point there are two possibilities, either exactly one of the statements is true or none of the statements are true. But it is impossible for none of the statements to be true since this means statement 10 is true. Therefore, we know that exactly one of the statements is true, in other words exactly nine statements are false. This says:

1. False.
2. False.
3. False.
4. False.
5. False.
6. False.
7. False.
8. False.
9. True.
10. False.