

## Proposition Basics

1. Declarative sentences/propositions purport to be true or false.
2. Declarative sentences/propositions consist, at minimum, of a subject and a predicate.
3. Two or more sentences, syntactically speaking, may assert the same proposition (propositions are semantic notions).

(Just as two or more words may mean the same thing: Sofa/Couch, Lawyer/Attorney, bachelor/unmarried person).

4. A single sentence may assert more than one proposition.
5. A single sentence may contain propositions that it does not assert but only expresses.

To assert a proposition is to claim that it is true, or to be committed to its being true. Sometimes, however, a proposition appearing in a longer proposition may not be asserted. In such a case, we say the proposition is expressed rather than asserted.

**Identify the component propositions and determine which of them are asserted and which are expressed only.**

1. The prosecution said that Jones committed the murder but this is false, because Jones is incapable of murder.

2. The selection of the right person for the job depends on whether the committee is diligent and the trustees are unbiased.
3. If you're going to get to heaven then you've got to raise a little hell.
4. If no one knows the trouble I've seen then either everyone is blind or I'm invisible.
5. My swing coach, who is very sharp, has spotted several flaws in my swing.
6. Whether lawyers are overpaid is irrelevant to my argument.
7. Wise men say only fools fall in love but Jones believes love is good for the intellect.
8. Either Warner choked and Martz didn't have a good game-plan or the Patriots are a great team.
9. Before Scrooge left for the day, he said that the Christmas bonus checks are in the mail.
10. No one is wiser than Socrates although everyone knows that he is a very odd man indeed.
11. It is a truth universally acknowledged that a rich single man must be in need of a wife. (Jane Austen).

For each pair of sentences, determine whether they are contraries, contradictories or not in conflict?

1. No students are rich.
  2. It's not the case that all students are rich.
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1. In 1996, the Army held its annual maneuvers in Spain.
  2. The Army always holds its annual maneuvers in the United States.
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1. The average salary for postal employees is no more than \$48,000.
  2. All postal employees make more than \$50,000.
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1. All employees must retire by age 70.
  2. Some employees can retire at age 65.

1. No one logged onto the network all day (May 29).
2. Someone logged onto the network just before midnight (May 29).

1. It's false that some golfers are cheaters.
2. No golfers are cheaters.

1. Bob worked out two days last week, Tuesday and Thursday.
2. Bob did not work out on Thursday last week.

1. No one saw the President go into the White House at midnight.
2. Someone saw the President go into the White House at midnight.

1. The first person kicked off the island was Jeremy.
2. No, Jeremy was the second person kicked off the island.

1. The first rider of the night was Jess.
2. Jess was not the first rider of the night.

1. It's false that some spiders are not carnivorous.
2. No spiders are carnivorous.

1. It snowed for three solid hours yesterday.
2. We had no snow at all yesterday, nor any yet today.

1. It's false that some reporters are liberals.
2. All reporters are liberals.

1. Some students are not philosophy majors.
2. It's not the case that some students are philosophy majors.

1. No one saw O.J. do it.
2. Bill Gates saw O.J. do it.

1. Not all sailors are good swimmers.
2. Some sailors are good swimmers.

1. Bob is not married.
2. Bob is not single. (Assume Bob is an adult male person).

1. The basketball was completely brown.
2. The basketball was both brown and blue.

1. The Wolves must score at least two more points to win.
2. The Wolves can win without scoring any more points.

1. Bob saw it and Joe did not.
2. Bob did not see it.

1. The second person on the moon was Buzz Aldrin.
2. There has been only one person on the moon.

1. Bob is older than Joe.
2. Joe is not younger than Bob.

1. Bob is older than Joe.
2. Joe is older than Bob.

1. Some people are unmarried.
2. No people are unmarried.

1. Some people are unflappable.
2. All people are flappable.

1. Neither a plane nor a train are quick enough for me.
2. Either a plane or a train is quick enough for me.

1. Tom is not both a student and a professor.
2. Tom is a professor but not a student.

**Implication Exercises:** For each pair of statements, determine if the first statement implies the second.

1. a. Only friends of mine are invited to the party.  
b. All friends of mine are invited to the party.
2. a. Anyone who loves AC/DC loves Zeppelin.  
b. Anyone who doesn't love Zeppelin doesn't love AC/DC.
3. a. If you buy now, you'll get a low price.  
b. If you don't buy now, you won't get a low price.
4. a. Only buses are permitted in the right lane.  
b. Buses are permitted only in the right lane.
5. a. All dogs are animals.  
b. Some dogs are animals.
6. a. Some of my cats are fickle.  
b. Some of my cats are not fickle.

7. a. Everything happens for a reason.  
b. There is a reason for which everything happens.
  
8. a. The grades won't be posted if I'm out of town.  
b. The grades will be posted if I'm not out of town.
  
9. a. The dancers are as graceful as they are talented.  
b. The dancers are graceful and talented.
  
10. a. The club is open to anyone who is a member or a guest.  
b. The club is open to anyone who is both a member and a guest.