

Engl 7, Student Examples #1, Fall 2006

1. All blonde haired people are mean.  
Some girls are blonde haired people.  
So, some blonde haired people are mean.
2. Some bananas are ripe fruit.  
All ripe fruit are good.  
So, some bananas are good.
3. All girls have long hair.  
No boy has long hair.  
So, all boy are not girls.
4. No red is green.  
Some purple is red.  
So, some green is purple.
5. Some books are good.  
Some novels are books.  
So, all novels are good.
6. All guys on the planet lie. All husbands are guys on the planet. Therefore all husbands lie.
7. All parents are strict. Some teachers are parents. So some teachers are strict.
8. Jordan and I went to the beach on Friday. Meg was not with Jordan and me. Thus Meg did not go to the beach on Friday.
9. All girls love shiny things. Tiffany and Co. has some shiny things. So all girls love Tiffany and Co.
10. Some strangers are kind, but some people are not strangers. Therefore some people are not kind.
11. All Nazis are evil. Adolf Hitler was a Nazi. So, Adolf Hitler was evil.
12. Some comedians are funny. Pat Sajak is not a comedian. Pat Sajak is not funny.
13. No cars are fliers. All airplanes are fliers. No airplanes are cars.
14. Some oranges are not sweet. All oranges are fruit. Some fruits are not sweet.
15. All pit bulls are mean. Some dogs are pit bulls. Some dogs are mean.
16. All dogs are bone lovers.  
Sadam does not love bones.  
Therefore Sadam is not a dog.
17. Some students don't like to exercise.  
All athletes like to exercise.  
So some students are not athletes.
18. All cats have seven lives.  
Blackie died when born.  
Therefore Blackie is not a cat.
19. All meat lovers gain weight.  
James is not a meat lover.  
Therefore James will not gain weight.
20. All real jobs are hard.  
Tommy's job is not hard.  
So Tommy's job is not a real job.
21. All monkeys eat bananas.  
I eat bananas.  
Therefore, I am a monkey.
22. All boys like sports.  
Some girls like sports.  
Therefore some girls are boys.
23. Some cars are fast.  
Some cars are red.  
Therefore, all red cars are fast.
24. Some bands have concerts at HP Pavilion.  
The Roots is a band.  
Therefore, The Roots will not have a concert at the HP Pavilion.
25. Some athletes play football.  
Terrell Owens plays football.  
Therefore all football players are Terrell Owens.
26. All cars are metallic painted  
All metallic paint is glossy  
So all cars are glossy
27. All computers have processors  
No processors use power  
So no computers use power
28. All trees have leaves  
All leaves have changing colors  
So all trees have changing colors
29. All Televisions show pictures  
Some Cameras show pictures  
So some cameras are televisions
30. All drugs get you high  
All highs are dangerous  
All drugs are dangerous

31. The sun is bright.  
Yellow is bright.  
So, the sun is yellow.

32. Some dogs are big.  
All lions are big.  
All lions are dogs.

33. Some cats are big.  
Some dogs are big.  
Some cats are dogs.

34. All baseball players are fast.  
No bowlers are fast.  
No baseball players are bowlers.

35. All cars are red.  
Red is pretty.  
All cars are pretty.

36. All bananas are delicious.  
Some apples are bananas.  
So some apples are delicious.

37. All vegetarians are skinny.  
Some dancers are vegetarians.  
So some dancers are skinny.

38. Some old people are not children-lovers.  
All grandparents are children-lovers.  
So some old people are not grandparents.

39. No lions are tigers.  
No bears are tigers.  
So no bears are lions.

40. All women are jewelry-lovers.  
No man is a woman.  
So no man is a jewelry-lover.

41. Some men are strong.  
I am one of those men.  
Therefore I am strong.

42. Asians are good at math.  
I am not Asian.  
So I am not good at math.

43. Gatorade is like water.  
Human thirst is quenched by Gatorade.  
So water quenches human thirst.

44. All basketball players are tall.  
Michael Jordan played basketball.  
So Michael Jordan is tall.

45. All mechanics know how to fix cars.  
My dad is a mechanic.  
Therefore my dad knows how to fix cars.

46. Some people are weird. All weird people are  
goat-eaters. Therefore, some goat-eaters are weird.

47. No arms are legs. No hands are legs. Therefore,  
no hands are arms.

48. Some women are liars, and liars are pretty, so all  
women are pretty.

49. All schools are clean. Some malls are clean, so  
schools are malls.

50. Some books are boring, and boring books are  
cheap, so some books are cheap.

51. All bananas are food.  
Fish is food.  
So, Bananas are fish.

52. All homework is busy work.  
Reading is homework.  
So, reading is busy work.

53. No friend can be trusted.  
Liz is my friend.  
Therefore, Liz cannot be trusted.

54. All chairs are comfortable.  
No Tables are chairs  
So, tables are not comfortable.

55. All red is evil.  
Satan is evil.  
Therefore, Satan is red.

56. All Lutherans are Christians.  
All Christians believe that Christ was the Holy  
Messiah.  
So all Lutherans believe that Christ was the Holy  
Messiah.

57. All Ninja Turtles are heroes.  
Some heroes are not turtles.  
So all Ninja Turtles are turtles.

58. Some drugs do not cause bad effects.  
Some bad effects do not come from drugs.  
All drugs cause effects.

**Answer Key. (Note: Corrections to the student explanation are made in square brackets at the end of each answer. If the correction involves both the explanation and the validity, the answer begins with an asterisk.)**

1. Valid. The middle term “blonde haired people” is distributed in the first premise. There are no negatives and there is nothing distributed in the conclusion.
2. Valid. The middle term is distributed in second premise, there are no negatives, no claims distributed in the conclusion.
3. \*Not valid, middle term is not distributed. [Remember that the first thing to do in analyzing a syllogism is to convert active verbs to state-of-being (form of “to be”). Here, for example, the second premise would be “No boy is long-haired,” in the form No A is B, so both A and B are distributed, and this passes the first rule. But the conclusion (All A are not B) is not in the form of a claim – and as we will see, that can be an ambiguous statement. Still, whether we treat it as “Some boys are not girls” or “No boys are girls,” the two possibilities, this argument would still pass the second and third rules, and therefore it is valid.]
4. Not valid, conclusion needs to have a negative because the premise has a negative.
5. Not valid, “novels” is distributed in the conclusion but not in the premise.
6. Rule 1: The middle term is “guys on the planet” and it is distributed in the first premise. Passed. Rule 2: There is no negative conclusion so this rule does not apply. Passed. Rule 3: The term “husbands” is distributed in the conclusion and it is distributed in the second premise. Passed. Argument #1 is a valid argument because it passes all three rules!
7. Valid Rule 1: The middle term is “parents” and it is distributed in the first premise. Passed. Rule 2: The conclusion is not negative so it does not apply. Passed. Rule 3: There is no term distributed in the conclusion. Passed. Argument #2 is a valid argument because it passes all three rules!
8. \*Valid. Rule 1: The middle term is “Jordan and I” and it is distributed in the first premise. Passed. Rule 2: The conclusion is a negative claim. The second premise is also a negative claim. Passed. Rule 3: The term distributed in the conclusion is “Meg.” It is also distributed in the second conclusion. Argument #3 is a valid argument because it passes all three rules. [The problem here is with the second premise: “Meg was not with Jordan and me.” In the first premise, the A term is “Jordan and I,” but in the second premise the B term is “with Jordan and me,” so those are really two different terms, giving this argument four terms instead of three, and it is therefore invalid.]
9. \*Invalid. Rule 1: The middle term is “shiny things.” It is not distributed in either premise; therefore this argument is not valid. Argument #4 is an invalid argument because it does not pass the first rule that the middle term must be distributive in at least one premise. [Remember that the first thing to do in analyzing a syllogism is to convert active verbs to state-of-being (form of “to be”). Here, for example, the second premise would be “Tiffany’s is a shiny-thing seller,” and since the B term there (seller) doesn’t appear in the first premise, this would be an invalid form. Please note that the first premise and conclusion also have active verbs: depending on the argument, we might want to render the first premise, for example, “All girls are shiny-thing lovers” or “Some shiny things are loved by all girls.” The B term in the second possibility is “loved by all girls.” But, because of the problem with the second premise, this remains an invalid syllogism.]
10. Invalid. Rule 1: The middle term is “strangers.” It is distributive in the second premise. Passed. Rule 2: The conclusion is negative. The second premise is also negative. Passed. Rule 3: The term distributed in the conclusion is “kind.” This term must therefore be distributive in a premise but is not. Argument #5 is invalid because it does not pass rule three that if a term is distributed in the conclusion it must be distributed in one of the premises.
11. Valid. The middle term is Nazi. Knowing that, we can now apply the rules. Is Nazi distributed at least once? The first premise is: All Nazis are evil. This premise takes the form all A are B. A is distributed in a premise that takes that form. In this premise, the middle term, Nazi, can be substituted for A. Therefore, this argument passes the first rule. It also passes the second rule because the conclusion and both premises are positive. In the conclusion, Adolf Hitler is distributed, but evil is not. Adolf Hitler is also distributed through the second premise, so this argument passes all three rules, making it valid.
12. Invalid. The middle term, comedian, is distributed in the second premise, so this argument passes the first rule. It passes the second rule as well because the conclusion and one of the premises are negative. Both terms are distributed in the conclusion, but only one of them, Pat Sajak, is distributed in the premise, so this argument is invalid because it fails the third rule.
13. Valid. Fliers is the middle term, and it is distributed in the first premise, so this argument passes the first rule. The second premise and the

- conclusion are negative, so this argument passes the second rule. Both terms in the conclusion are distributed, and each is also distributed in one of the premises, so this argument does not violate any rule.
14. Valid. This argument passes the first two rules because the middle term, oranges, is distributed in the second premise, and because the conclusion and the first premise are negative. This argument is valid because it also passes the third rule. Sweet is the only term distributed in the conclusion, and it is distributed in the first premise.
  15. Valid. Pit Bulls is the middle term, and it is distributed in the first premise. The conclusion and the premises are positive. There are no terms distributed in the conclusion. This argument passes all three rules.
  16. Valid.
  17. Valid, since the middle term, exercise, is distributed in the first premise; the first premise and conclusion are negative claims, and the second term is distributed in the conclusion and the premise. [Ok, but the middle term is actually “exercise lovers.”]
  18. \*Invalid: Neither premise is negative, as the conclusion is, and the middle term is not distributed in either premise. [No. In terms of the first premise, when we say in the second that “Blackie died when born,” we are really saying “Blackie didn’t have seven lives.” So this argument would be: “All cats are seven-life livers. No Blackie was a seven-life liver. Therefore, no Blackie was a cat.” Which is valid.]
  19. \*Valid. The middle term is meat lovers, Second premise and conclusion both are negative. [But what about the third rule? The conclusion would be “No James is a weight-gainer,” so both terms are distributed. James is distributed in the second premise, but weight-gainer is not distributed in the first premise, so this is invalid.]
  20. \*Valid. The middle term is distributed and the second premise and conclusion both have a negative claim. [This has the same error as the previous explanation: “a real job” is distributed in the conclusion, but not the premise, so this is an invalid argument.]
  21. This is invalid because the middle term, bananas, is not distributed in either premise, which breaks rule number 1. [Ok, but remember that the first thing to do in analyzing a syllogism is to convert active verbs to state-of-being (form of “to be”). Here, for example, the first premise would be “All monkeys are banana-eaters.”]
  22. This is invalid because the middle term, sports, is not distributed in either premise, which breaks rule number 1. [Ok, but this has the same problem as the previous example: “All boys are sport-lovers.”]
  23. This is invalid because the middle term, cars, is not distributed in either premise, which breaks rule number 1. It is also invalid because the term distributed in the conclusion, red cars, is not distributed in either premise, which breaks rule number 3.
  24. This is invalid because there is a negative conclusion without any negatives in the premises, which breaks rule number 2. [Ok, but we shouldn’t have gotten to the second rule, because this also breaks the first rule: “band,” the middle term, is not distributed in either premise.]
  25. This is invalid because the middle term, football, is not distributed in either premise, which breaks rule number 1. It is also wrong because the term distributed in the conclusion, football players, is not distributed in either premise, which breaks rule number 3. [Ok, but remember that the first thing to do in analyzing a syllogism is to convert active verbs to state-of-being (form of “to be”). Here, for example, the first premise would be “Some athletes are football players.” And that makes it a lot clearer that there is something wrong with the form here: “football players” appears in all three claims, and “athletes” appears in only one. So, yes, this is invalid, but you don’t have to apply to the rules to know that.]
  26. \*Valid. Rule 1: The middle term is "metallic paint" and is distributed in both premises. Passed. Rule 2: There are no negative claims or conclusions. Passed. Rule 3: "Cars" is distributed in the premise and the conclusion. Passed. This is a valid syllogism. [The wording here is a problem. This is fine if we are to understand the premises as “All cars are painted metallic, and all things painted metallic are glossy.” But if the second premise is that “All metallic paint is glossy,” and not the things painted with it, then we have four terms, and an invalid form. So be clear about your terms.]
  27. Valid. Rule 1: The middle term "processor" is distributed in the premises. Passed. Rule 2: The conclusion is negative and so is one of the premises. Passed. Rule 3: "Computers" and "power" are distributed in the conclusion and premises. Passed. [Remember that the first thing to do in analyzing a syllogism is to convert active verbs to state-of-being (form of “to be”). Here, for example, the claims would be, “All computers are processor-based, and no processor-based thing is a power-consumer, so no computers are power-consumers.” This would still be valid, but it doesn’t always work out (see the next exercise, for example), so be sure to convert the verbs first.]
  28. \*Invalid. Rule 1: The middle term "leaves" is distributed in the second premise. Passed. Rule

- 2: Neither the conclusion nor the premises are negative. Passed. Rule 3: "trees" is distributed in both the conclusion and the first premise. Passed. [This is probably invalid, because the active verbs have hidden the fact that "leaves" may be a different term each of the premises. Without the active verbs, we would have "All trees are leafy, and all leaves are changeable, so all trees are changeable." But "leafy" and "leaves" do not mean the same thing, so we have four terms instead of three, and this is invalid.]
29. Invalid. Rule 1: The middle term "pictures" is not distributed in either premise. Failed. [Ok, remembering that the two premises are really "All tvs are picture-showers, and some cameras are picture-showers."]
30. Valid. Rule 1: The middle term is distributed in the second premise. Passed. Rule 2: Neither the conclusion nor premises are negative. Passed. Rule 3: The middle term "highs" are distributed in the 2nd premise. Passed. [Again, remember to convert active verbs. The first premise here is "All drugs are high-producers," so as long as you agree that the second premise can be restated as "All high-producers are dangerous," then this is valid.]
31. \*Valid, because it passes all the rules. [This fails the first rule, since "bright," the middle term, is not distributed in either premise. Therefore, invalid.]
32. Not valid, because the middle term is not distributed.
33. Not valid, because the middle term is not distributed.
34. Valid.
35. Valid. [Sort of. There is a difference between something being pretty, and something having a pretty color. So if we said "Red is a pretty color, so all cars are a pretty color," it would be clearer.]
36. Valid. "Banana" is the middle term and is distributed in at least one premise. The conclusion is not negative and both premises are not negative. There is no term distributed in the conclusion.
37. Valid. "Vegetarians" is the middle term and is distributed in at least one premise. The conclusion is not negative and both premises are not negative. There is no term distributed in the conclusion.
38. Valid. The middle term is "children-lovers" and it is distributed in the first premise. The first premise and the conclusion are both negative claims. "Grandparents" is distributed in the conclusion and also in the first premise.
39. Invalid. There can be at most one negative premise in a valid argument, but here there are two.
40. Invalid. "Women" is the middle term and is distributed in both premises. The second premise and the conclusion are both negative claims. Both "men" and "jewelry-lover" are distributed in the conclusion but "jewelry-lover" is not distributed in the premise.
41. Invalid because it fails rule #1. Men is not distributed in either premises. [True, this isn't a valid form, but the problem is in the second premise. The A term in the first premise is "men," but instead of saying "I am a man" in the second premise, this says "I am one of those men"—in other words, "I am a strong man." Which means that "strong man" is a term in all three claims, so this is clearly an invalid form. On the other hand, there is a kind of circular logic to assuming "I am a strong man" and concluding "I am a strong man."]
42. Invalid because it fails rule #3. Math isn't distributed in the premises.
43. Invalid because it fails rule #3. Thirst is not distributed. [There are two problems here: the B term in the first premise, and the active verb in the conclusion. In the first premise, the B term is not "water" but "something like water." And the B term in the conclusion, once you have converted the active verb, would be "human-thirst quencher." So that makes five (not three) terms in this argument—more a problem of confusion than validity.]
44. Valid.
45. Valid.
46. \*Valid. ["Weird" (or "weird people") appears three times in this argument, so it clearly has an invalid form.]
47. Invalid. Does not pass the second rule. There are two negative premises, which is not allowed.
48. Invalid. Does not pass the third rule. The term distributed in the conclusion is not distributed in either premise ("women").
49. Invalid. Does not pass first rule. The middle term, "clean," is not distributed in either premise.
50. Valid.
51. Not valid, because it does not pass the first rule, where the middle term gets distributed.
52. Valid, because it passes all three rules.
53. Valid, middle term is distributed, negative in both premises, and term distributed in conclusion is distributed in premise.
54. \*Valid. Passes all three rules. [Invalid: "comfortable" is distributed in the conclusion and not in the premise.]
55. Not valid, because the middle term is not distributed.
56. Valid. 1<sup>st</sup> Rule: Christians are distributed in both premises. Passed. 2<sup>nd</sup> Rule: There are no negative claims and the conclusion is positive. Passed. 3<sup>rd</sup> Rule: The term in the conclusion is also distributed in the premise. Passed. [In fact, "Christians" is distributed only in the second premise, but the middle term only needs to be distributed in one premise.]
57. Invalid. 1<sup>st</sup> Rule: Heroes is distributed in both premises. Passed. 2<sup>nd</sup> Rule: If there is a negative

premise, there must be a negative conclusion. Failed.  
3<sup>rd</sup> Rule: Ninja Turtles is distributed in both the  
premise and conclusion. Passed. [“Heroes” is not  
distributed in either premise, so this fails the first  
rule.]

58. Invalid. 1<sup>st</sup> Rule: Bad effects is distributed in both  
premises. Passed. 2<sup>nd</sup> Rule: The conclusion must be  
negative if the premise is negative. Failed. 3<sup>rd</sup> Rule:  
Drugs is distributed in both premises but effects is  
not. [This doesn't really make much sense. The first  
premise is “Some drugs are not bad-effects causers,”  
so there is no middle term.]