



1. Either Notre Dame is in Indiana or Notre Dame is in Ohio.
  2. Notre Dame is not in Ohio.
- 

C. Notre Dame is in Indiana. (1,2)

an argument is  
valid when it is  
impossible for its  
premises to be  
true and its  
conclusion false

an argument is  
sound when it is  
valid and all of its  
premises are true

Here is a second way to see that the argument is valid. Try to come up with a way to make the premises true but the conclusion false.

Since the argument is about Notre Dame's location, we want to try out different ways of locating Notre Dame in order to make the premises true and the conclusion false.

Suppose first that we imagine that ND is somewhere other than Indiana or Ohio. Then we make the first premise false, so that is no good. Suppose instead that we imagine that ND is in Ohio. Then we make the second premise false, so that is no good. The only other possibility is that ND is in Indiana -- and that makes the conclusion true!

So we can see that it is impossible to place Notre Dame anywhere that would make the premises true and the conclusion false.





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Oh this. Then we make the first premise false, so that is good. Suppose instead

Suppose first that we imagine that ND is somewhere than Indiana or

that is not good. The only other possibility is that ND is in Indiana - and that

that we imagine that  $ND$  is in  $O$  is. Then we make the second premise false, so

make the conclusion true!

So we can see that it is impossible to place Notre Dame anywhere that would

make the premise true and the conclusion false.





**Notre Dame is in Indiana**

**Notre Dame is in Ohio**

**Notre Dame is in neither Indiana or Ohio.  
(Maybe it is somewhere else, maybe it  
does not exist, ...)**