

Validity and Soundness in Deductive Arguments

A. Which of the following arguments is the best and why?

I

1. I have a cat that climbed Mt. Everest.
2. Everybody who's climbed Mt. Everest is named Mr. Tibbles.
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3. I have a cat named Mr. Tibbles.

II

1. An adult elephant is heavier than a mouse.
2. An adult elephant is heavier than a toothpick
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3. An adult elephant is heavier than a mouse with a toothpick.

III

1. Notre Dame is in Indiana.
2. If Notre Dame is in Indiana, then it's not in Alaska.
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3. Notre Dame is not in Alaska.

B. State some definitions of validity.

C. For each of the following, say if it is possible, and, if so, provide an example:

1. A valid argument with all false premises and a true conclusion.

4. An invalid argument with at least one true premise and a false conclusion.

2. A valid argument with all true premises and a false conclusion.

5. A valid argument with at least one false premise and a false conclusion.

3. An invalid argument with all false premises and a true conclusion.

6. A valid argument with at least one true premise and a false conclusion.

D. State the definition of a sound argument.

What do you know about the conclusion of a sound argument?

E. Bonus Questions:

1) Are circular arguments (i.e. those where one of the premises is basically the same as the conclusion) valid?

2) Can you have a valid argument with one premise? With three premises? Give examples.

3) What other things besides validity and soundness are important in determining whether an argument is good?