

Philosophy 201: Precept 1

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A *statement* is something which is evaluable for truth or falsity.

Roughly, an argument is a chain of reasoning in support of a conclusion.

More precisely, an *argument* is a series of statements one of which is the *conclusion* and the others of which are the *premises*, such that the conclusion is meant to follow from, or be supported by, the premises.

An argument is *valid* just in case it takes a form such that it is impossible for the premises to be true and the conclusion to be false.

An argument is *sound* just in case it is valid and all its premises are true.

To show an argument is invalid, we can give a *counterexample*, a possible situation in which the premises are true and the conclusion is false.

Argument 1.

- (1) Every prime number is a multiple of four.
- (2) Every multiple of four is an even number.
- (c) Hence, every prime number is even.

Argument 2.

- (1) Every square is a rectangle.
- (2) Every square has four sides.
- (c) Therefore, every rectangle has four sides.

Argument 3.

- (1) The number of stars is even.
- (2) Every even number is divisible by 2.
- (c) Hence, the number of stars is divisible by 2.

Arguments 4 and 5.

- (1) God exists or $2+2=5$.
- (2) $2+2\neq 5$.

(c) So, God Exists.

(1) God doesn't exist or $2+2=5$.

(2) $2+2\neq 5$.

(c) So, God doesn't exist.

Argument 6.

(c) If it's raining, then it's raining.

Argument 7.

(1) It's raining outside.

(c) It's raining outside.

Argument 8.

(1) It's raining outside.

(2) It isn't raining outside.

(c) The ground is wet.

Arguments 9 and 10.

(1) All observed emeralds are green.

(c) The next observed emerald will be green.

(1) 96% of observed borogoves are mimsy.

(c) 96% of borogoves are mimsy.