

Concepts in Logic

An argument is a sequence of sentences, the last of which (the conclusion) is supposed to follow from the others (the premises).

Three Flawed Arguments:

A.

1. If Bush is married, then Bush is not president.
2. Bush is married.
3. Therefore Bush is not president.

B.

1. If Bush is a bachelor, then Bush is male.
2. Bush is a bachelor.
3. Therefore Bush is male.

C.

1. Bush is president of the U.S.A.
2. Bush has a mother named 'Barbara.'
3. Therefore, Bush is a male.

Argument A is valid =df. in virtue of A's logical form, A's conclusion must be true, if A's premises are all true.

Argument A is sound =df. (1) A is valid, and (2) all of A's premises are true.

Sample Arguments:

D.

1. Stem cell research causes some human organisms to be destroyed.
2. Human life is precious.
3. Therefore stem cell research is immoral.

E.

1. Factory farming causes animals to suffer.
2. If factory farming causes animals to suffer, then factory farming is immoral.
3. Therefore, factory farming is immoral.

F.

1. If Jay is a conservative, then Jay supports free-market capitalism.
2. It is not the case that Jay is a conservative.
3. Therefore, it is not the case that Jay supports free-market capitalism.

G

1. If Mittens is a kitten, then Mittens is a mammal.
2. It is not the case that Mittens is a kitten.
3. Therefore, it is not the case that Mittens is a mammal.

H.

1. If Rufus is a dog, then Rufus is a mammal.
2. Rufus is a dog.
3. Therefore, Rufus is a mammal.

I.

1. If Martin robbed the liquor store, then Martin has performed a morally wrong act.
2. Martin robbed the liquor store.
3. Therefore, Martin has performed a morally wrong act.

J.

1. If moral relativism is true, then Adam's act of loving Steve is morally right.
2. It is not the case that moral relativism is true.
3. Therefore, it is not the case that Adam's act of loving Steve is morally right.

K.

1. If roses are red then violets are green.
2. Roses are red.
3. Therefore, violets are green.

N.

1. If the idea of substratum is unintelligible, then empiricism is true.
2. It is not the case that the idea of substratum is unintelligible.
3. Therefore, it is not the case that empiricism is true.

O.

1. If determinism is true, then no one is morally responsible for his or her actions.
 2. Determinism is true.
 3. Therefore, no one is morally responsible for his or her actions.
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P.

1. If Sam is a Socialist, then Sam supports universal health care.
2. It is not the case that Sam supports universal health care.
3. Therefore, it is not the case that Sam is a Socialist.

Q.

1. If Col. Mustard is guilty, then Col. Mustard's fingerprints are on the lead pipe.
2. NOT: Col. Mustard's fingerprints are on the lead pipe.
3. Therefore, NOT: Col. Mustard is guilty.

R.

1. If Brutus is a rabbit, then Brutus is a mammal.
2. NOT: Brutus is a mammal.
3. Therefore, NOT: Brutus is a rabbit.

S.

1. If Carla is a vegetarian, then Carla avoids bacon.
2. Carla avoids bacon.
3. Therefore, Carla is a vegetarian.

T.

1. If living a long life is the sole good, then Bertrand's life was great.
2. Bertrand's life was great.
3. Therefore, living a long life is the sole good.

U.

1. If Sadie is a mouse, then Sadie is a mammal.
2. Sadie is a mammal.
3. Therefore Sadie is a mouse.

Valid? Sound?

(AA)

1. If Determinism is true, then we have no freewill.
2. We have no freewill.
3. Therefore, Determinism is true.

(BB)

1. It is impossible that there be a chain of causes with no beginning.
2. If it is impossible that there be a chain of causes with no beginning, then God exists.
3. Therefore, God exists.

(CC)

1. If Homosexuality is not natural, then Gay sex is morally wrong
2. Homosexuality is not natural.
3. Therefore, Gay sex is morally wrong.

(DD)

1. Flying through space in a spaceship is not natural.
2. If Flying through space in a spaceship is not natural, then Flying through space is morally wrong.
3. Therefore, Flying through space is morally wrong.

(EE)

1. If mathematical truths are known a priori, then mathematical truths are necessary truths.
2. Mathematical truths are known a priori.
3. Therefore, mathematical truths are necessary truths.

(FF)

1. If Socrates is virtuous then Socrates is courageous.
2. Socrates is courageous.
3. Therefore, Socrates is virtuous.

(GG)

1. If killing a newborn human baby is wrong, then killing an adult cow is wrong.
2. NOT: killing an adult cow is wrong.
3. Therefore, NOT: killing a newborn human baby is wrong.

(HH)

1. If Kate has a moral obligation to perform open-heart surgery on Jim, then Kate has a moral obligation to break Jim's rib cage.
2. Kate has a moral obligation to perform open-heart surgery on Jim.
3. Therefore, Kate has a moral obligation to break Jim's rib cage.

(II)

1. If Socrates has a moral obligation always to preserve life, then Socrates has a moral obligation to escape his own execution.
2. Socrates has a moral obligation to escape his own execution.
3. Therefore, Socrates has a moral obligation always to preserve life.

(JJ)

1. If God exists, then there is no evil in the world.
2. NOT: there is no evil in the world.
3. Therefore, NOT: God exists.

(KK)

1. If we are responsible for our actions then we have free will.
2. We are responsible for our actions.
3. Therefore, we have free will.

(LL)

1. If I know that I am at UMass, then I am certain that I am not Dreaming.
2. It is not the case that I am certain that I am not Dreaming.
3. Therefore, it is not the case that I know that I am at UMass.

(MM)

1. God knows everything.
2. If God knows everything, then God now knows what you will do at 3:51 P.M. on Dec 11, 2013.
3. If God now knows what you will do you will do at 3:51 P.M. on Dec 11, 2013, then you cannot do anything other than what God believes you will do at 3:51 P.M. on Dec 11, 2013.
4. Therefore, you cannot do anything other than what God believes you will do at 3:51 P.M. on Dec 11, 2013.