

Worksheet 13.6: Euler Diagrams and Syllogistic Arguments

1. What is another name for a syllogistic argument?
2. What four types of statements did Aristotle consider when he developed syllogistic arguments?
3. What does it mean when we determine that an argument is valid?
4. Explain the differences between a symbolic argument and a syllogistic argument.
5. Can an argument be valid if the conclusion is a false statement? Explain your answer.
6. Can an argument be invalid if the conclusion is a true statement? Explain your answer.

Use Euler diagrams to determine whether the syllogism is valid or invalid.

7. All parrots talk.
Chicklet is a parrot.
∴ Chicklet talks.
8. All kangaroos jump.
All things that jump have wings.
∴ All kangaroos have wings.
9. All As are Bs.
All Bs are Cs.
∴ All As are Cs.

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10. No basketball players are greater than 8 feet tall
Pete is not a basketball player.
∴ Pete is greater than 8 feet tall.
11. No tennis players are wrestlers.
Allison is not a wrestler.
∴ Allison is a tennis player.
12. Some soaps float.
All things that float are lighter than water.
∴ Some soaps are lighter than water.

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13. Some people love mathematics.
All people who love mathematics love physics.
 \therefore Some people love physics.
14. Some hot dogs are made of turkey.
All things made of turkey are edible.
Some things that are made of beef are edible.
 \therefore Some hotdogs are made of beef.