

Play: *The Hound of the Baskervilles* • Issue: November 10-24, 2008

Name: _____ Class: _____ Date: _____

Solving Syllogisms

Sherlock Holmes uses deductive reasoning to solve many of his cases. A syllogism (SIH-luh-jih-zum) is one form of deductive reasoning. Syllogisms present certain assumptions from which you can draw a conclusion.

Example:

All mammals are warm-blooded.
All dogs are mammals.
Therefore, all dogs are warm-blooded.

Directions: To practice your deductive reasoning skills, solve the syllogisms below. Circle the correct answer in each question.

- All birds have feathers. All cardinals are birds. Which of the following statements is true?
 - All birds are cardinals.
 - All cardinals have feathers.
 - Feathers can only be found on birds.
 - More information is needed to draw a conclusion.
- Robert never misses a Red Sox game. The Red Sox are playing a game tonight. Which of the following statements is true?
 - Robert will play with the Red Sox.
 - Robert's favorite team is the Red Sox.
 - Robert will watch the Red Sox game tonight.
 - More information is needed.
- Everyone in the gym has purple hair. Everyone with purple hair has a cat. Sara has purple hair. What can you deduce about Sara?
 - She is in the gym.
 - She has a cat.
 - She is in the gym, and she has a cat.
 - More information is needed.
- All hamsters are mammals. All mammals are vertebrates. Helen is a hamster. What can you deduce about Helen?
 - Helen is a mammal but not a vertebrate.
 - Helen is a vertebrate but not a mammal.
 - Helen is a mammal and a vertebrate.
 - More information is needed.
- T-shirts are comfortable. T-shirts are inexpensive. Jake's shirt is comfortable. What can you deduce about Jake's shirt?
 - Jake is wearing a T-shirt.
 - Jake's shirt is inexpensive.
 - Jake's shirt is an inexpensive T-shirt.
 - More information is needed.
- Max eats only pepperoni pizza. Katie loves pizza, but she's a vegetarian. The cafeteria is serving cheese pizza for lunch. Which of the following statements is true?
 - Only Max will eat the school lunch.
 - Only Katie will eat the school lunch.
 - Both Katie and Max will eat the school lunch.
 - Neither Katie nor Max will eat the school lunch.

7. Alice is a hairdresser. Everyone who gets a haircut from Alice is happy with the result. Chelsea likes her new haircut. What can you deduce?
- (A) Alice cut Chelsea's hair.
 - (B) Alice did not cut Chelsea's hair.
 - (C) Alice likes Chelsea's haircut.
 - (D) More information is needed.
8. All grizzly bears eat fish. A lot of grizzly bears live in Alaska. Will saw a grizzly bear last week.
- (A) Will lives in Alaska.
 - (B) Will is a fish.
 - (C) The grizzly bear that Will saw eats fish.
 - (D) More information is needed.
9. Andrew's favorite class is art. Art meets on weekdays that begin with the letter T. Andrew has P.E. the day before Friday. What can you conclude?
- (A) Andrew has P.E. and art on Thursdays.
 - (B) Andrew has P.E. on Tuesdays.
 - (C) Andrew has P.E. and art on Tuesdays.
 - (D) More information is needed.
10. Everyone in Ms. Baxter's class wears brown shoes. Everyone who wears brown shoes likes soccer. Everyone who likes soccer hates tennis. Maya sits in the front row in Ms. Baxter's class.
- (A) Maya wears brown shoes.
 - (B) Maya likes soccer.
 - (C) Maya hates tennis.
 - (D) all of the above
11. Gary only wears socks on Mondays. Gary always wears the same color socks as Kendra. Kendra wears yellow socks on Mondays if her pink socks are dirty. Her socks are dirty only when she has gone hiking over the weekend. She always hikes when the weather is nice. Today is Monday. It didn't rain over the weekend. What color socks is Gary wearing?
- (A) pink
 - (B) yellow
 - (C) He isn't wearing socks.
 - (D) More information is needed.
12. Every truck in Cedar City has flat tires. Every truck with flat tires is red. Misa only likes red trucks. Which statement is true?
- (A) Misa doesn't like the trucks in Cedar City.
 - (B) Every car in Cedar City is red.
 - (C) Misa likes the trucks in Cedar City.
 - (D) none of the above
13. Zogs like Bogs. Mogs like Cogs. Cogs like Zogs, but not Mogs. Bogs like everyone Cogs dislike. Which of the following is true?
- (A) Bogs like Zogs, Mogs, and Cogs.
 - (B) Bogs like Mogs.
 - (C) Bogs dislike Mogs.
 - (D) none of the above
14. Mr. Jones's cats have stripes. Mrs. Jones feeds tuna to striped cats and dry mix to spotted cats. Fifi the cat belongs to Mr. Jones. What can you conclude?
- (A) Fifi eats tuna and has stripes.
 - (B) Fifi eats dry mix and has stripes.
 - (C) Fifi eats tuna and has spots.
 - (D) Fifi eats dry mix and has spots.