

For 23 - 28, determine if the argument is deductively valid or deductively invalid.

- (23) [P1] Kim is going to try out for the basketball team or she is going to try out for the soccer team.
[P2] She isn't going to try out for the basketball team.
[C] Therefore, she is going to try out for the soccer team.
- (24) [P1] If Sue drove to Ohio, then she is not at work today.
[P2] Sue is not at work today.
[C] Therefore, Sue drove to Ohio.
- (25) [P1] The Sears Tower is taller than the Empire State building.
[P2] The Empire State building is taller than the Chrysler Building.
[C] Therefore, the Sears tower is taller than the Chrysler Building.
- (26) [P1] If Sue drove to Ohio, then she is not at work today.
[P2] Sue is at work today.
[C] Therefore, it is not the case that Sue drove to Ohio.
- (27) [P1] Ninety-six percent of the marbles in the jar are red.
[P2] One marble is about to be selected, at random, from this jar.
[C] Therefore, that marble will be red.
- (28) [P1] All human beings have or had a mother.
[P2] Zeus is a god.
[P3] No being can be a god and a human being.
[C] Therefore, Zeus does not have a mother.

For 29 - 34, identify the type of argument (section 1.4).

- (29) In a 2008 study lead by Dr. Keilah Worth, 6522 children, 10 to 14 years old, were contacted by phone and asked about the movies rated R for violence that they had seen. 32 percent of the children reported that they had seen the movie *Blade II*. Dr. Worth and her colleagues concluded that about 32 percent of all 10 to 14 year olds in the United States saw the movie *Blade II*.
- (30) Tigers and jaguars are both members of the genus *Panthera*. Jaguars will, if given the opportunity, kill and consume cattle. Thus, Tigers will, probably, if given the opportunity, kill and consume cattle.
- (31) [P1] If Edmond Halley's theory that comets orbit the sun is true, then a comet will be observed in late 1758 or early 1759.
[P2] A comet was observed, by Johann Palitzsch, a German farmer and an amateur astronomer, on December 25, 1758.
[C] Therefore, Edmond Halley's theory that comets orbit the sun is probably true.
- (32) Eighty-seven percent of the kittens that I have seen have been adorable and cuddly. Therefore, about eighty-seven percent of all kittens are adorable and cuddly.
- (33) Sixty percent of the students at State University are adorable and cuddly. Roger is a student at State University, and so there is a sixty percent chance that Roger is adorable and cuddly.
- (34) Rebecca and Mary are both biology majors who have taken chemistry, physics, and calculus courses. Rebecca is planning to apply to medical school, and so Mary is probably also planning to apply to medical school.