Week 1: An Introduction to Arguments

[P1] There is a bridge in your town that hundreds of cars drive over every day.
[P2] Engineers who work for the town regularly inspect the bridge.
[P3] Every once in a while, repairs are made to the bridge.
[C] This bridge will be safe to drive over tomorrow.

[P1] In high school, Stan was a member of the chess club, the audio-visual club, and the juggling club. [C] Stan is smart.	[P1] Only students who are members of the juggling club can learn how to "breathe fire." [P2] Mary isn't a member of the juggling club. [C] Mary can't learn how to "breathe fire."

I have eaten bread almost every day of my life, and every time I have done so it has provided nourishment. So, the next time I eat bread, it will provide nourishment.

The night of Mozart's death was dark and stormy; at the funeral, too, it began to rage and storm. Rain and snow fell at the same time, as if Nature wanted to shew her anger.

Bats are the only mammals that can fly. Bartok is a mammal, but he is not a bat. Thus, Bartok cannot fly.

[P1] Seoul, South Korea is larger than Mexico City. [P2] Mexico City is larger than New York City. [C] Therefore, Seoul is larger than New York City.	[P1] It is either warm outside or cold outside. [P2] It is not cold outside. [C] Therefore, it is warm outside.
[P1] Will Ferrell is a warm-blooded animal. [P2] All goats are warm-blooded animals. [C] Therefore, Will Ferrell is a goat.	[P1] Will Ferrell is a warm-blooded animal. [P2] All warm-blooded animals are goats. [C] Therefore, Will Ferrell is a goat.
[P1] If Peter went to the police, then Margaret was arrested today. [P2] Margaret was arrested today. [C] Therefore, he went to the police.	[P1] If Peter went to the police, then Margaret was arrested today. [P2] Peter went to the police. [C] Therefore, Margaret was arrested today.

[P1] Peter is a human 12-year-old, and he can breathe under water (without any artificial aids). [P2] Both of Peter's parents can breathe underwater (without ...). [P3] All of Peter's aunts and uncles can breathe underwater (wit…). [P4] All of Peter's grandparents can breathe underwater (witho…). [P5] Peter's older sister can breathe under water (without any …). [C] Therefore, Peter's younger brother will be able to breathe under water (without any artificial aids).	[P1] If I went to a store that sells milk, then I got milk. [P2] I went to a store that sells milk. [C] Therefore, I got milk.
	[P1] If I went to a store that sells milk, then I got milk. [P2] I got milk. [C] Therefore, I went to a store that sells milk.

[P1] George H.W. Bush's oldest son is George W. Bush. [P2] George W. Bush was the President. [C] George H.W. Bush's oldest son was the President.	[P1] Wilt Chamberlain's oldest son is George W. Bush. [P2] George W. Bush was the President. [C] Wilt Chamberlain's oldest son was the President.
[P1] In every U.S. Presidential election since 1852, either the Democratic candidate or the Republican candidate has won. [C] The Democratic candidate or the Republican candidate will win the next U.S. Presidential election.	[P1] The Jones Memorial Bridge is regularly inspected by qualified engineers. [P2] Cars and trucks have been driving over it for many years. [C] Therefore, it will be safe to drive over the Jones Memorial Bridge tomorrow.
[P1] Mary is a cold-blooded animal. [P2] All cold-blooded animals are lizards. [C] Therefore, Mary is a lizard.	[P1] Will Ferrell is a man. [P2] All men are warm blooded. [C] Therefore, Will Ferrell is warm blooded.

[P1] From 1817 to 1821, Natchez was the capital of Mississippi.
[P2] In 1821 and 1822, Columbia was the capital of Mississippi.
[P3] From 1822 until today, Jackson has been the capital of Mississippi.
[C] Next year, Jackson will be the capital of Mississippi.

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.