

**Round 2**  
**WinterBowl 2009**  
**Questions © Academic Hallmarks**  
**Revised for pyramidity by Matthew Dirks**

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**Warm-Up 1.** George McClellan was a commander of an army named for this river. John Brown crossed it in his attempted raid on Harper's Ferry. What is this river near the U. S. Capitol?

**Potomac**

**Warm-Up 2.** Blood can leave this organ through the pulmonary artery or the aorta. To help stop bleeding, the wounded area should be raised against this organ. What is this organ, which pumps blood to the rest of your body?

**heart**

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1. American colonists used this process to crystallize the saline content of seawater in marshes. Unlike boiling, which occurs on a liquid's entire mass, this process occurs only on a liquid's surface. What is this natural process which, in the water cycle, moves water from the ocean to the atmosphere?

**evaporation**

2. The three parts of this organ are the duodenum, the jejunum, and the ileum. About twenty feet in length, this organ is primarily involved in digestion and absorption of food. What is this organ, which, in the digestive tract, is located between the stomach and the large intestine?

**small intestine**

3. This mountain may be seen from the Johnston Ridge Observatory. The 84-year old Harry Truman refused to abandon his home and so was killed when this volcano erupted. What is this mountain in Washington which erupted in May 1980?

**Mount St. Helens**

4. Perhaps the most famous authors of this genre is Bashō. This type of Japanese poetry often describes nature. What is this type of three-line poetry, in which the first and last line have five syllables and the middle line has seven?

**haiku**

5. How many prepositional phrases are in this sentence? "The funny thing about narwhals is that they have horns on their heads, and the funny thing about horns is that they have narwhals on their bottoms."

**4**

6. This man led an army to crush the Whiskey Rebellion, perhaps a bit of an overreaction. He also led his troops to victory at the Battle of Trenton after crossing the Delaware. Who is this American politician, the first president of the United States of America?

**(George) Washington**

7. What word in this line is in the possessive case? "The Queen of Hearts sent Alice a tart message after the croquet match."

**(of) Hearts**

8. In 2008, Texan authorities removed children from a ranch in which this type of marriage was practiced. A defining characteristic of Mormon fundamentalism, what is this practice in which a man has multiple wives?

**polygamy (polygamous)**

9. Juan Ponce de León called these "The Martyrs." The Dry Tortugas National Park is the closest national park to this archipelago. What are these islands, which stretch about 105 miles into the sea from mainland Florida?

**(Florida) Keys**

10. First and middle initials required. Some of this composer's better-known works include the Goldbach Variations and the "Tocatta and Fugue in D Minor". He also wrote the collections *The Well-Tempered Clavier* and *The Art of Fugue*. Who is this German composer, a master of the baroque style, and, along with Beethoven and Brahms, one of the three B's of classical music?

**J.S. (Johann Sebastian) Bach**

11. The US annexed this polity under William McKinley, after which Stanford Dole became the president of its provisional government. Kamehameha the Great (ka-MAY-ha-MAY-ha) was its first monarch, and Lili'uokalani (LEE-lee-oo-OH-kah-LAH-nee) was its last. What is this one-time kingdom, a chain of Polynesian islands which became a US state in 1959?

**Hawaii**

12. This division of the earth's interior is made mostly of an iron-nickel alloy. Its temperature is approximately equal to that of the outer visible layer of the sun, and it is divided into a liquid outer part and a solid inner part. Name this innermost layer of the Earth.

**(inner) core**

13. This phenomenon is transmitted through all materials by molecular collisions. The speed named for this phenomenon is equal to Mach 1. What is this phenomenon, measured in decibels?

**sound**

14. Some of these bodies include one in Spokane named for Rathdrum Prairie and one in Federal Way named for Mirror Lake. Good sources of groundwater, they are sometimes confused with underground rivers. What are these bodies of rock which water can easily pass through?

**aquifer(s)**

15. A 1755 earthquake in this country destroyed records of the voyages of Vasco de Gama. In 1654, this European country took control of Brazil from the Dutch. What is this country, whose capitol is Lisbon, and which borders Spain?

**Portugal**

**Half Time! Ask for substitutions.**

16. In quantum mechanics, these subatomic particles are said to travel in orbitals. Their flow causes incandescence in light bulbs. What are these particles, which carry a negative charge?

**electron(s)**

17. In the 1850s, one member of this body bludgeoned another with a cane. In 2005, this body confirmed John Roberts as chief justice of the United States. What is this body in which Barack Obama served for almost three years before being elected president?

**(United States) Senate**

18. Major earthquakes devastated this city in 1906, when 23,000 water service pipes were destroyed, and in 1989, when the Cypress Street Viaduct collapsed. Both of those earthquakes were caused by the San Andreas Fault. A famous skyscraper in this city is the Transamerica Pyramid. What is this city, the location of the Golden Gate Bridge?

**San Francisco**

19. This document complains that a certain king had "constrained our fellow Citizens taken Captive on the high Seas to bear Arms against their Country." Its preamble begins with a clause about the course of human events, and the second paragraph discusses certain unalienable rights. What is this document, written primarily by Thomas Jefferson?

**Declaration of Independence**

20. Math. Continued ratios. Express this ratio in lowest terms: 36 to 30 to 24 to 6.

**6 to 5 to 4 to 1**

21. Jorge Luis Borges is a native of this country, which borders Paraguay, Bolivia, Brazil, Uruguay, and Chile. One famous president was Juan Perón, married to Eva. What is this country, whose capitol is Buenos Aires? **Argentina**
22. Math. Evaluate  $7+8$ , modulo twelve. In other words, what time is it eight hours after seven o'clock? **three (o'clock)**
23. Along with Leibniz, this man is credited with discovering calculus. His third law of motion states that every action has an equal and opposite reaction. Who is this scientist who, according to legend, discovered gravity when an apple fell on his head? **(Sir Isaac) Newton**
24. By committing this crime, some chief priests convinced Judas Iscariot to betray Jesus of Nazareth. In 2009, Rod Blagojevich was arrested for solicitation of this crime. What is this crime, in which money or some other favor is offered in return for a service? **bribery**
25. Diamonds are an allotrope of this element, and this element is the primary ingredient of coal. This versatile element can form four bonds and is the subject of organic chemistry. What is this element, whose atomic symbol is C, and which, along with oxygen and hydrogen, makes up carbohydrates? **carbon**
26. His vice president, Andrew Johnson, succeeded him as president after this man was assassinated by John Wilkes Booth. Who is this man, the 16<sup>th</sup> president of the United States, who signed the Emancipation Proclamation during the Civil War? **(Abraham) Lincoln**
27. The Medici were an important family during this period in European history. Its name, French for “rebirth,” refers to the reemerging popularity of Greek and Roman styles. What is this period, which saw artists such as da Vinci and Michelangelo? **Renaissance**
28. This organelle is present in eukaryotic cells, but not prokaryotic cells. It contains the cell's DNA. What is this organelle, whose name is Latin for “nut,” the cellular control center? **nucleus**
29. Hey, more stuff related to Abraham Lincoln! As a senator, Lincoln was known for his “spot resolutions,” by which he voiced objection to this war declared by James K. Polk. Battles in this war include Veracruz and the Alamo. What was this war, ended by the 1848 Treaty of Guadalupe Hidalgo, fought between the United States and its southern neighbor? **Mexican-American War**
30. Math. What is the sum of the composite numbers greater than 10 and less than 20? **75**

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**Alternates**

**Alt 1.** One major setback in the wars named for this man was his army's invasion of Russia in 1812. In 1801, President Jefferson learned that this leader had secretly reacquired the Louisiana Territory from Spain. Who is this short French man who had a crushing defeat at Waterloo?

**Napoleon Bonaparte (accept either name) (Napoleon I of France)**

**Alt 2.** Math. The half-life of a radioactive isotope is 12 years. What fraction of the original substance will still be radioactive at the end of 60 years? **1/32**

**Alt 3.** When Darwin studied Galapagos finches, he noticed differences in these structures corresponding to the birds' diets. What are these structures which birds use for eating, grooming, et cetera?

**beaks**

**Alt. 4** Math. The area of a circle is given by pi times the square of what quantity?

**(the length of the) radius**

**Alt. 5** At the outset of the Civil War, the Confederacy knew it had to take what fort that guarded Charleston harbor?

**Fort Sumter**