Warm-Up 1: Assume x and y are nonzero real numbers. The expression x/y ("x over y") can never equal y/x ("y over x") unless what is true?

x equals y (y equals x)

Warm-Up 2: Two answers required. Kim Dae-jung was president of of one of these countries for five years and won the Nobel Peace Prize for his attempts at reconciliation with its southern neighbor, whose Supreme Leader is Kim Jong-il. Name these two countries which occupy a peninsula on the eastern border of the Chinese mainland.

North Korea (Democratic People's Republic of Korea) and South Korea (Republic of Korea)

1. This mountain is in the same range as Kanchenjunga (kan-chen-JUNG-a) and Makalu. It was first successfully ascended by Edmund Hillary and Tenzing Norgay. What is this mountain in the Himalayas, the tallest in the world?

    Mount Everest (Accept things that sound like "Chomolungma" or "Sagarmāthā")

2. In sinkholes, this is the primary agent responsible for removing soil and bedrock. In November 2009, NASA announced that it had found this substance on the moon. What is this clear liquid, whose chemical formula is H_2O?

    water

3. Thomas Edison helped develop a predecessor to these, the wax cylinder. The main types of these were turned at 78, 45, and 33 1/3 rotations per minute. What are these objects which were played on 20th-century jukeboxes?

    records (accept equivalent)

4. What word were you trying to type if the fingers of your left hand accidentally slipped one key to the right and you typed "esty"?

    wart

5. When these flow down a sea level valley, they may erode its bed to as much as 800 feet below sea level. Global warming is likely causing their rapid retreat, which has drastically increased over the past fifteen years. What are these giant masses of ice which move over land?

    glaciers

6. Cells in this system include neurons and glia. What is this system which, in higher animals, has the functions of detecting stimuli, transmitting messages, interpreting information, and responding?

    nervous system

7. Math. If the number of dogs in a pound is eight times greater than the number of cats, and there are 450 dogs and cats in a pound, how many dogs are in the pound?

    400

8. One minor character in this work is as weak as can be, as strong as can be, as smart as can be, and as stupid as can be. Another introduces himself with the lines "My angles are many. My sides are not few." That character appears in a scene where, the more that the characters eat, the hungrier they become. What is the book by Norton Juster, in which Milo, Tock, and the Humbug travel to rescue Rhyme and Reason?

    The Phantom Tollbooth

9. This single-celled fungus changes sugars into alcohol and carbon dioxide. During Passover, Jews do not eat bread containing this fungus. Name this agent that causes bread dough to rise.

    yeast (accept "leaven")

10. What is the indirect object in this line? "The herpetologist fed his snakes mice."

(his) snakes

11. Its current premier is Gordon Campbell. Major cities in this province include Vancouver and Victoria. What is this southwesternmost Canadian province?

British Columbia (la Colombie-Britannique)

12. What is the object of the preposition below? "I feel like I'm diagonally parked in a parallel universe."

(a parallel) universe

13. This type of radiation has a wavelength of 10 to 400 nanometres, giving it a shorter wavelength than visible light. Exposure to this radiation leads to the synthesis of Vitamin D in humans. What is this radiation, which is given off by black lights, and which may cause sunburn?

ultraviolet

14. The "slow match" variety of these was frequently covered with potassium nitrate. Name this device, essentially a long cord of waterproofed fabric with a core of gunpowder, which is used to fire an explosive charge.

fuse

15. The formula to find this quantity is mass divided by volume. For water, this quantity is about 1.0 grams per cubic centimetre, though it changes with temperature. What is this property of liquids?

density

Half Time! Ask for substitutions.

16. Math. Find two consecutive integers whose sum is 77.

38, 39

17. The angle of incidence of light rays striking a flat surface is 47 degrees. What is the angle of reflection for these rays?

47 degrees

18. Yet more math. Solve the following equation for x: $4x = 6 + x$ ("four times x equals six plus x").

2

19. What is the verb in the independent clause in this sentence? "While the present century was in its teens, and on one sunshiny morning in June, there drove up to the great iron gate of Miss Pinkerton's academy for young ladies, on Chiswick Mall, a large family coach, with two fat horses in blazing harness, driven by a fat coachman in a three-cornered hat and wig, at the rate of four miles an hour."

drove

20. This is probably the most dangerous form of static electricity. According to *USA Today*, it most frequently occurs in Florida, especially Tampa. Name this phenomenon, involved in a famous experiment designed by Benjamin Franklin involving a kite and a key.

lightning

21. Math. Hrothgar caught 12 walleye and Æthelred caught 8. How many must Cynewulf catch so the three of them have an average of 18 each?

34

22. She is commonly known by a name that means "having all gifts," since, according to Hesiod, all the gods gave her gifts. In fact, she was herself given as a gift to Epimethius. Who is this Greek lady who released all the evils into the world from her namesake box?

Pandora (do not accept "Rhea")

23. Math. Solve the following for q: $q^2 + 2q + 1 = 0$ ("q squared plus two q plus one equals zero").

-1

24. The multi-story, apartment-like dwellings inhabited by the Anasazi peoples of the American Southwest were constructed of what traditional building material, after which the software company responsible for Flash and Acrobat is named?

Adobe

25. You need only its first name. Captained by Robert Gray, this ship sailed into Grays Harbor in 1792, supporting the American claim to the Oregon Territory. She was the first American ship to circumnavigate the globe. Name this ship, which shares a name with the largest river in the Pacific Northwest, the border between Washington and Oregon.

(U.S.S.) Columbia (Rediviva)

26. The framers of the Constitution were hesitant to allow the president to be elected directly by the people. They devised what system by which Americans vote for a limited number of people who in turn cast their votes for president?

Electoral College (electoral system)

27. A famous chorus named for these objects occurs in the opera *Il Trovatore*. In the opera *Siegfried*, the title character splits one of these in half with the sword Nothung (NOH-toong). What are these tools made of heavy black iron upon which blacksmiths shape metal by hammering?

anvil

28. Math. Given a wave speed of 340 metres per second, how many seconds does it take the sound of a gong to travel 68 metres?

0.2 (seconds) (1/5 of a second)

29. One famous picture in this style depicts Sunday afternoon on a certain island. Another painting of this style is a self-portrait of the artist with a bandaged ear. What is this 19th-century art movement, artists of which include Pierre-Auguste Renoir, Paul Gaugin, and Vincent van Gogh?

impressionism

30. Math. If you read 80 words per minute and there are 400 words on a page, how many minutes will you need to read 10 pages?

50 (minutes)

Alternates

Alt. 1. These people and other things are all associated with what country? F. W. de Klerk, the Sharpeville massacre, Transvaal, the African National Congress, apartheid, Nelson Mandela.

South Africa

Alt. 2. In one book by this author, Jaspers declares his love for his nephew's fiancée, Rosa. This author died when he was halfway through writing that book, *The Mystery of Edwin Drood*. His first novel describes the adventures of members of the Pickwick Club. Who is this British author of such works as *David Copperfield*, *A Christmas Carol*, and *Oliver Twist*?

(Charles John Huffam) Dickens

Alt. 3. Angular momentum is equal to angular velocity times the moment of this property. Newton defined it as "a power of resting." What is this force, a natural resistance to a change in motion, that causes passengers on a train to fall when the train starts or stops?

inertia

Alt. 4. This state was founded as a debtors' colony by the amusingly-named James Oglethorpe. At one point during the Civl War, this state threatened to secede from the Confederacy. What is this state, the southernmost of Britain's North American colonies?

Georgia (do not accept "Province of Georgia")

Alt. 5. This class of vertebrates appeared during the Carboniferous period. Protective shells cover their eggs, and scaly hides protect them from predators. What is this class that includes snakes, crocodiles, and lizards?

Reptiles (Reptilia)