



Tossup 1: Literature — Literature

<p>It is titled with the protagonist's maiden name rather than her husband's name, because she refuses to be known by the latter. This can be explained by the fact that she does not love her husband, but rather married him for his money. When a rival of his, Eilert Lovborg, arrives with a great manuscript, she burns the manuscript and suggests to him that he kill himself, thinking that it would secure her husband a professorship. Though Lovborg ends up dead, her pistol is traced and she ultimately kills herself. Name this play set in Oslo about the wife of Jorgen Tesman, written by Henrik Ibsen.</p>	<p><u>Hedda Gabler</u></p>
--	----------------------------

Bonus 1: Fine Arts — Music

Identify the following modes from clues.		
A	This mode is also known as natural minor, and originates on the sixth note of a major scale.	<u>Aeolian</u>
B	The Simpsons theme and the West Side Story melody Maria feature the raised fourth common to this mode.	<u>Lydian</u>
C	Norwegian Wood, by the Beatles, is in this mode, a major scale with a lowered seventh.	<u>Mixolydian</u>
D	This mode sounds from the third scale degree of a major scale. It originated in the home of the mythic king Midas.	<u>Phrygian</u>



Tossup 2: Social Studies — Other

<p>It first convened on February 14, 1949, and like other parliamentary bodies, it elects the prime minister and passes laws. However, it can pass any law it wishes by simple majority, even those that conflict with its country's unofficial constitution. It is formally elected every four years, but disagreement and unstable coalitions lead to more frequent elections. Name this legislative branch of the Israeli government.</p>	<p>The <u>Knesset</u></p>
--	----------------------------------

Bonus 2: Science — Chemistry

<p>Name these concepts about compounds that are similar to each other.</p>		
A	<p>If two atoms have the same electron configuration, like neon and a sodium ion, they are said to be this.</p>	<p><u>Isoelectronic</u></p>
B	<p>Stereoisomers that are mirror images of each other are said to be these, as contrasted with diastereomers (<i>DI-uh-STARE-ee-oh-murz</i>).</p>	<p><u>Enantiomers</u></p>
C	<p>Geometric isomers can be either "trans" or this, indicating what positions are occupied on either side of non-rotating bonds.</p>	<p><u>Cis isomers</u></p>
D	<p>Molecular oxygen and ozone are both made only of oxygen atoms, but they have different formulas, so they are called these, like graphite and diamond.</p>	<p><u>Allotropes</u></p>



Tossup 3: Math — Other (Computational: 30 Seconds)

You have two red beads, two blue beads, and one green bead. You are arranging all five beads on a bracelet. How many distinct bracelets can you form, assuming that the same-colored beads are identical, and that bracelets are identical when rotated?	<u>6</u>
--	----------

Bonus 3: Literature — Mythology

Given a description, identify the following kings from Greek mythology.		
A	This king had 50 sons that married the 50 daughters of his brother Danaus.	<u>Aegyptus</u>
B	He was warned that his wife would wed their son Oedipus after killing him, and had the baby taken to Mt. Cithaeron.	<u>Laius</u>
C	After coming back from fighting in the Trojan War, he was stabbed to death in a bathtub by his wife Clytemnestra and her lover Aegisthus.	<u>Agamemnon</u>
D	He was told that a man with one sandal would bring about his demise, but little did he know that it would be his own relative, Jason.	<u>Pelias</u>



Tossup 4: Miscellaneous — Entertainment

<p>This musical is based on a controversial play by Frank Wedekind. It follows a group of young adolescents struggling against suppression to find themselves. Identify this musical which was nominated for eleven Tonys and won eight, including the award for Best Musical.</p>	<p><u>Spring Awakening</u></p>
--	---------------------------------------

Bonus 4: Social Studies — Current Events

<p>Given a European country and a position, identify the person who holds that position.</p>		
A	France; President.	Nicolas <u>Sarkozy</u>
B	Ukraine; President.	Viktor Andriyovych <u>Yushchenko</u>
C	United Kingdom; Prime Minister.	James Gordon <u>Brown</u>
D	Romania; President.	Traian <u>Băsescu</u>



Tossup 5: Math — Calculus (Computational: 30 Seconds)

<p>You have a right triangle with legs x and y. How fast is the area of the triangle changing if x is 2, y is 3, dx over dt is 3, and dy over dt is negative 1?</p>	<p><u>7/2</u></p>
---	-------------------

Bonus 5: Literature — Literature

<p>Given a description of a series of novels, give the title of the first published novel in that series.</p>		
<p>A</p>	<p>Some 95 novels and stories follow French life from around 1815 through 1848. It was written by Honoré de Balzac (<i>ball-zahk</i>).</p>	<p>Les <u>Chouans</u> (<i>lay choh-AN</i>) (also accept <i>The Chouans</i>)</p>
<p>B</p>	<p>Though initially released separately they are now usually published as a single work. John Dos Passos follows several characters attempting to fit into American society.</p>	<p><u>Forty-Second Parallel</u></p>
<p>C</p>	<p>Covering action in colonial America between 1740 and 1804, this series follows Natty Bumppo, known to settlers as "Leatherstocking".</p>	<p>The <u>Pioneers</u></p>
<p>D</p>	<p>While T.H. White's <i>The Once and Future King</i> would not be published wholly until 1958, this first book was published in 1938.</p>	<p>The <u>Sword in the Stone</u></p>



Tossup 6: Fine Arts — Visual Art

On display in the Musee d'Orsay, the original title of this work was The Bath. The lighting and rough background suggest that it takes place in a studio rather than outside since there are few shadows cast and the central figure is unnaturally lit as she stares at the viewer. The other woman in the background also appears much too large compared to the three figures in front. Identify this Manet work in which the depiction of two fully dressed men with a nude female caused quite the stir at the Salon des Refuses in 1863.

Luncheon on the Grass
(accept *Le déjeuner sur l'herbe*)

Bonus 6: Math — General

Identify the following terms related to object-oriented programming.

A	This is a particular instance of a class.	<u>Object</u>
B	A class defines certain functions that instances can perform, functions called these.	<u>Method</u>
C	When a particular instance is created, this function is called.	<u>Constructor function</u>
D	If one class is a special kind of another class, this principle states that the sub-class gains properties that the super-class was defined to have.	<u>Inheritance</u>



Tossup 7: Science — Biology

<p>It is performed in a variety of media, including acrylamide and agar, and uses dyes like coomassie or ethidium bromide to stain small molecules. This technique is able to sort out negatively-charged restriction fragments by size, applying a current to them within a gel medium. Name this laboratory procedure that separates similarly-sized DNA fragments.</p>	<p>Gel <u>electrophoresis</u></p>
---	--

Bonus 7: Miscellaneous — Interdisciplinary

<p>Identify the following fictional substances.</p>		
<p>A</p>	<p>This multidimensional substance provides the energy to power the warp drive of all Federation starships in Star Trek.</p>	<p><u>Dilithium crystals</u> (<i>dy-LITH-ee-um; do NOT prompt on lithium</i>)</p>
<p>B</p>	<p>In Cat's Cradle, this substance freezes all of the world's water.</p>	<p><u>Ice-Nine</u></p>
<p>C</p>	<p>Stronger than steel, and far lighter, its name comes from the Sindarin for "grey glitter". Galadriel's (<i>gal-AH-dreels</i>) ring is made from it, as is the armored shirt given to Bilbo by Thorin Oakenshield.</p>	<p><u>Mithril</u> (<i>MEETH-rill; accept true silver</i>)</p>
<p>D</p>	<p>Extensive exposure to this drug colors the iris, cornea, and sclera to a dark blue. It also extends life, and is needed by the steersmen of the Spacing Guild to guide ships through interplanetary space.</p>	<p><u>Melange</u> (<i>prompt on spice; it's from Dune</i>)</p>



Tossup 8: Literature — Literature

<p>The narrator asks it what type of being could have created it, being awed by its fiery eyes and "fearful symmetry." Each stanza refines this question, asking who could "twist the sinews" of its heart, whether its creator smiled when seeing what he had made, and whether it could possibly be the same being that had previously created the lamb. This last question is a reference to another poem of the author's, "The Lamb," from his collection Songs of Innocence. Name this poem in Blake's Songs of Experience about a big cat.</p>	<p>The <u>Tyger</u></p>
--	--------------------------------

Bonus 8: Science — Physics

Identify these concepts related to electricity and magnetism.		
A	This law states that the electric flux through a surface is proportional to the charge contained within it.	<u>Gauss's law</u>
B	Magnetic flux is thought to always be zero, meaning that none of these hypothetical objects exist.	Magnetic <u>monopoles</u>
C	This law of induction states that the induced voltage in a closed loop is proportional to the change in magnetic flux through it.	<u>Faraday's law of induction</u>
D	This law states that voltage and current induced by changing magnetic fields are created in the direction that causes them to generate a flux that opposes the change in flux.	<u>Lenz's law</u>



Tossup 9: Social Studies — U.S. History

<p>Born in 1823, this man served one term in the United States House of Representatives before becoming a director of the Erie Railroad. In 1870, he began a process of charging exorbitant rates to build public works in New York, and keeping the excess money for himself. He became the subject of political cartoons by Thomas Nast, which ultimately ruined his career. Name this politician, the head of the Democratic political machine at Tammany Hall in the 1860s.</p>	<p>"Boss" William Magear <u>Tweed</u></p>
---	--

Bonus 9: Math — Geometry

<p>You have a wire of length 5. What area does it enclose when bent into the following shapes?</p>		
A	An equilateral triangle.	<u>$25\sqrt{3} / 36$</u> (accept $25/36\sqrt{3}$)
B	A square.	<u>$25/16$</u>
C	A circle.	<u>$25 / (4\pi)$</u>
D	An isosceles triangle with base of length 1.	<u>$\sqrt{15} / 4$</u>



Tossup 10: Science — Physics

<p>Their existence was first proposed by Pauli to account for apparent loss of energy during beta decay, and they were first detected in 1956. They come in three flavors named after their corresponding leptons, electron, mu, and tau, but can oscillate between those flavors. Because they are colorless, electrically neutral, and have little mass, they interact with very little matter. Name these particles, trillions of which pass through us every second.</p>	<p>Neutrino (<i>do not accept neutron</i>)</p>
--	---

Bonus 10: Social Studies — World History

Identify these facts related to Otto von Bismarck.		
A	Bismarck was originally from this country, which is no longer a sovereign state.	Prussia
B	Bismarck instigated the fight against this country in 1864 over the areas of Schleswig and Holstein.	Denmark
C	German Unification was achieved after this 1870s war.	Franco-Prussian War
D	The answer to part three was directly brought about by this, a heavily edited account by Bismarck of a meeting between a German leader and a French ambassador.	Ems Dispatch (<i>accept Ems Telegram</i>)

END OF FIRST HALF – 2 minute timeout



Tossup 11: Social Studies — Geography

<p>The impressive list of natural resources controlled by this country includes one-seventh of the Earth's fresh water, though relatively little land is actually suitable for agriculture. Almost 60% of the world's mining companies are located here, and logging remains a vital industry in the west, while eastern coastal communities have still not fully recovered from the collapse of cod fisheries in the early 1990s. Name this country whose Athabasca Oil Sands are located in Alberta.</p>	<p><u>Canada</u></p>
--	----------------------

Bonus 11: Science — Astronomy

<p>Identify these phenomena which change the observed appearance of stars.</p>		
<p>A</p>	<p>When objects move away from the observer, the light they emit has a longer perceived wavelength, causing this effect.</p>	<p><u>Redshift</u></p>
<p>B</p>	<p>Because mass warps space-time, light passing near heavy masses appears bent, an effect called this.</p>	<p><u>Gravitational lensing</u></p>
<p>C</p>	<p>The Earth's orbit causes observers on Earth to be at different positions at different times, causing the relative positions of stars to appear to change, an effect called this.</p>	<p><u>Stellar parallax</u></p>
<p>D</p>	<p>Rotating bodies drag space-time with them slightly, causing objects to appear in different places, in an effect called this.</p>	<p><u>Frame dragging</u></p>



Tossup 12: Science — Earth Science

<p>This method was first proposed in 1569 by its namesake. It preserves rhumb lines as straight lines, which makes it useful in navigation. This cylindrical projection method typically maintains the relative sizes of land near the equator, but shows Greenland over ten times larger than it actually is. Name this most common map projection which dramatically stretches the north and south latitudes.</p>	<p><u>Mercator projection</u></p>
---	--

Bonus 12: Literature — Literature

<p>Who says botanists can't be book lovers? Answer the following about novels that have to do with flowers.</p>	
A	<p>Even after her baby is stillborn, this character in <i>The Grapes of Wrath</i> still holds hope for the human condition, a hope which she displays by breastfeeding a starving man.</p> <p><u>Rose of Sharon</u></p>
B	<p>The title character masquerades as a foppish Englishman, but really spends his life saving Frenchmen from the guillotine.</p> <p>The <u>Scarlet Pimpernel</u></p>
C	<p>Friar William of Baskerville solves the mystery of the several strange murders that occur at an abbey in 1327 in this Umberto Eco work.</p> <p>The <u>Name of the Rose</u></p>
D	<p>This Ruth Benedict work about World War II era Japan is an instance of "Anthropology at a Distance", being written without visiting the country itself.</p> <p>The <u>Chrysanthemum and the Sword</u></p>



Tossup 13: Math — Algebra (Computational: 30 Seconds)

Express the following complex number in $a + b i$ form. E to the pi times i power, times e to the power of 2 plus i times pi over two.

0 + negative e squared times i
(accept negative i times e squared)

Bonus 13: Social Studies — U.S. History

Name the following historical U.S. Senators.

A	This Illinois Senator was known as the "Little Giant."	Stephen Arnold <u>Douglas</u>
B	This pro-slavery South Carolinian became famous for beating Senator Charles Sumner with a cane.	Preston <u>Brooks</u>
C	This Louisianan was a senator from 1932-1935, and was known as the Kingfish.	Huey Pierce <u>Long Jr.</u>
D	This Missouri Senator lost his bid for re-election to a dead man in 2000 before becoming Attorney General.	John <u>Ashcroft</u>



Tossup 14: Literature — Mythology

He is the father of Hati and Skoll, who chase the moon and the sun, respectively. Other family members include his brother Jörmungandr and sister Hel. Bound by the chain Gleipnir, he bit off the hand of the god Tyr after he was not unbound from his fetters. Finally escaping from this binding at Ragnarok, identify this mythological creature who is destined to devour Odin.

Fenris wolf (accept *Fenrir* or *Fenrisulfr*)

Bonus 14: Math — Calculus

Identify these terms related to functions.

A This is a function defined at every point in its domain, and whose limit at any point is equal to its value.

Continuous function

B This is a function that satisfies the conditions in Part A, and whose inverse also satisfies those conditions.

Bicontinuous function

C This is a function that can be differentiated an infinite number of times.

Smooth function

D This is an infinitely-differentiable function which is also equal to its Taylor series about any point in its domain.

Analytic function



Tossup 15: Science — Chemistry

<p>The first man to state the law of conservation of mass, he disproved the phlogiston (<i>fluh-JIS-tun</i>) theory of heat. He discovered that diamond was made of carbon, and named the gases oxygen and hydrogen. Through his job as a tax collector, he was condemned as a traitor and sentenced to execution at 50. Name this French scientist known as the father of modern chemistry, who was guillotined during the Reign of Terror.</p>	<p>Antoine <u>Lavoisier</u></p>
--	--

Bonus 15: Miscellaneous — Technology

Name these programming languages.		
A	This scripting language created by Larry Wall is known for its strong regular expression support.	<u>Perl</u>
B	This programming language and hypertext preprocessor on version 5.2.5 is typically used to create dynamic webpages.	<u>PHP</u>
C	This language created by Bjarne Stroustrup was first formed to be a better form of the C programming language.	<u>C++</u>
D	Named after Lord Byron's daughter, this language was designed on the order of the Department of Defense.	<u>Ada</u>



Tossup 16: Miscellaneous — Sports

<p>This team's first Super Bowl appearance came in 1986, when they lost 46-10 to the Chicago Bears. In 2001 their starting quarterback was replaced by a sixth round pick out of Michigan, and the following offseason they dealt Drew Bledsoe to rival Buffalo. They won their first Super Bowl of the decade on an Adam Vinatieri field goal, and two more championships have followed since. Name this NFL team quarterbacked by Tom Brady.</p>	<p><u>New England Patriots</u> (<i>accept either half of name</i>)</p>
--	---

Bonus 16: Social Studies — Geography

<p>Answer these questions about unusual flags of the world.</p>		
A	<p>The only countries with square flags are Switzerland and this smallest independent nation.</p>	<p><u>Vatican City</u> (<i>prompt on Vatican</i>)</p>
B	<p>Libya boasts the world's only monochromatic national flag, a field of this color.</p>	<p><u>Green</u></p>
C	<p>This Asian country's double-pennant flag is the world's only non-rectangular national standard.</p>	<p><u>Nepal</u></p>
D	<p>The flag of this South American country is unique in having different emblems on each side: the national coat of arms on the obverse and treasury seal on the reverse.</p>	<p><u>Paraguay</u></p>



Tossup 17: Literature — Literature

<p>Described as "clean favored, and imperially slim," he is one of the more esteemed citizens living in Tilbury Town. The rest of the town he lives in is rather poor, and strives to be like him, forgoing meat and instead carving bread to eat. An enigmatic character, we never find out the reason for his demise, yet at the poem's conclusion, he "went home and put a bullet through his head." Identify this titular character of a poem by Edwin Arlington Robinson.</p>	<p><u>Richard Cory</u></p>
--	-----------------------------------

Bonus 17: Fine Arts — Visual Art

<p>Given a brief description of and a work by the Renaissance artist, name him.</p>		
A	<p>This Flemish artist was known for painting landscapes and scenes from everyday life. He painted "The Peasant Wedding".</p>	<p><u>Pieter Bruegel the Elder</u></p>
B	<p>This German artist was also famous as a goldsmith and engraver. He created "The Adoration of the Magi".</p>	<p><u>Albrecht Durer</u></p>
C	<p>This Italian artist, who painted the Virgin of the Annunciation, was beatified by Pope John Paul II.</p>	<p><u>Fra Angelico</u> (<i>prompt Angelico; accept <u>Fra Giovanni da Fiesole</u></i>)</p>
D	<p>This Italian artist was known for his use of the color red. He painted "The Venus of Urbino".</p>	<p><u>Titian</u> (<i>accept <u>Tiziano Vecelli</u></i>)</p>



Tossup 18: Math — General

<p>This data structure contains nodes, only one of which can be accessed at any time. Computers usually have a pointer storing the current memory location of the topmost node. Peek allows the top node to be viewed, while pop returns the top node while also removing it from the structure. Push, on the other hand, puts a node on top. Name this structure that follows the last in first out principle, the opposite of a queue.</p>	<p><u>Stack</u></p>
--	---------------------

Bonus 18: Literature — Literature

Identify the following English poets based on a description.		
A	In addition to having some pretty sweet mutton chops, this Englishman wrote "Dover Beach."	Matthew <u>Arnold</u>
B	This Cavalier poet penned "To the Virgins, to Make Much of Time."	Robert <u>Herrick</u>
C	Thomas Hardy took his title "Far From the Madding Crowd" from this man's "Elegy Written in a Country Churchyard."	Thomas <u>Gray</u>
D	This soldier and friend of Siegfried Sassoon produced "Dulce (<i>dull-chay</i>) et Decorum Est."	Wilfred <u>Owen</u>



Tossup 19: Social Studies — World History

<p>The original name of this program was the Second Five-Year Plan and its stated goal was to overtake Great Britain in industrial output. Its dubious successes included the rapid collectivization of farms and a 30% boost in pig iron production. Some better known failures included thousands of collapsed dams and the worst famine in human history. Name this 1958-1960 program, instigated by Mao Zedong, which starved at least 20 million people to death.</p>	<p><u>Great Leap Forward</u></p>
--	---

Bonus 19: Math — Other

<p>There are ten people in a meeting. Five are women, and five are men.</p>		
<p>A</p>	<p>How many ways can a five-person committee be formed using five of the ten people in the meeting?</p>	<p><u>252</u></p>
<p>B</p>	<p>How many five-person committees can be formed where two of the members are women, and three are men?</p>	<p><u>100</u></p>
<p>C</p>	<p>The five-person committee has a president, secretary, and treasurer. How many distinct trios can be formed given any particular committee?</p>	<p><u>60</u></p>
<p>D</p>	<p>How many distinct trios can be formed out of the ten-person meeting?</p>	<p><u>720</u></p>



Tossup 20: Fine Arts — Music

<p>Taught by Zemlinsky, this Jewish-born composer converted to Lutheranism at age 24. An influential music theorist, his most famous song cycle consists of so-called Sprechstimme (<i>SHPREK-shtim-uh</i>) half-speaking and half-singing, and is based on Albert Giraud's French poems of the same name, <i>Pierrot Lunaire</i>. Composer also of <i>Pelleas et Melisande</i> and the <i>Transfigured Night</i> string sextet, name this 20th-century pioneer of the 12-tone serialist method of composition.</p>	<p>Arnold <u>Schoenberg</u></p>
---	--

Bonus 20: Science — Biology

<p>Aneuploidy is the state of not having full sets of chromosomes. Identify these terms related to chromosomal disorders.</p>		
A	<p>A picture of the chromosomes in a cell is called this, and can detect chromosomal abnormalities in number or shape.</p>	<p><u>Karyotype</u></p>
B	<p>Having three copies of any chromosome is called this.</p>	<p><u>Trisomy</u></p>
C	<p>Women with only one X chromosome have this disorder, which may lead to underdeveloped female characteristics.</p>	<p>(Ulrich-)<u>Turner</u> syndrome</p>
D	<p>This syndrome caused by a deletion in chromosome 5 is named after the characteristic feline cry that affected infants have.</p>	<p><u>Cri du chat</u> syndrome</p>

END OF MATCH



Tossup A: Fine Arts — Visual Art

<p>Commissioned by Pope Julius II to replace a depiction of gold stars over a blue sky, it resulted in the design of a new plaster formula known as intonaco. The genealogy of Christ is traced out in the vertical areas above each window, while five sybils and seven prophets appear on the pendentives supporting the main vault. In the center are three groups of stories from Genesis, including the legendary Creation of Adam scene. Identify the famous location of this 1512 Michelangelo fresco.</p>	<p>The <u>Sistine Chapel ceiling</u></p>
---	--

Bonus A: Science — Physics

<p>Identify these concepts related to particle physics.</p>		
<p>A</p>	<p>This theory abbreviated SM consists of a set of particles and interactions that model the universe well, with the exception of gravity.</p>	<p><u>Standard Model</u></p>
<p>B</p>	<p>These particles come in six varieties, including up, down, and charm.</p>	<p><u>Quark</u></p>
<p>C</p>	<p>Electrons, muons, and tau particles are this type of elementary particle which has no color force.</p>	<p><u>Lepton</u></p>
<p>D</p>	<p>This particle has not yet been discovered, but is theorized to be responsible for mass.</p>	<p><u>Higgs boson</u></p>



Tossup B: Social Studies — U.S. History

<p>Photographer Bill Gallagher won the 1953 Pulitzer prize for taking a picture of this man that revealed a hole in his shoe. This photograph became a symbol of his down to earth nature and frugality. The 31st Governor of Illinois, he served as U.S. Ambassador to the United Nations from 1961 to 1965. Identify this failed Democratic Presidential candidate who lost in two landslide elections to Dwight D. Eisenhower.</p>	<p>Adlai E. <u>Stevenson II</u></p>
---	--

Bonus B: Literature — Literature

<p>Identify these works by the winner of the 1962 Nobel Prize for Literature.</p>		
<p>A</p>	<p>In this story, the two main characters work in Soledad, California, with a dream of owning their own farm.</p>	<p><u>Of Mice and Men</u></p>
<p>B</p>	<p>Jody Tiflin grows up on a farm in this 1933 coming of age novella featuring a titular horse.</p>	<p>The <u>Red Pony</u></p>
<p>C</p>	<p>Taking its title from Shakespeare, this work is centered around Ethan Hawley, a grocery store clerk.</p>	<p>The <u>Winter of Our Discontent</u></p>
<p>D</p>	<p>This nonfiction work recounts the author's experience on a cross country road trip with his pet poodle.</p>	<p><u>Travels With Charley In Search of America</u></p>



Tossup C: Science — Chemistry

Many metal oxides exhibit this property, as do many organic compounds to a lesser degree, depending on the pKa of the other reagent. Amino acids exhibit it due to their amine and carboxyl groups, the former capable of accepting a hydrogen and the latter capable of donating one. Name this property of water and many other compounds that can act as either acids or bases.

Amphoteric (*accept amphoterism*)

Bonus C: Math — Algebra

Answer the following related to expanding binomials.

A	What is the sum of the coefficients of x plus y , quantity cubed?	<u>8</u>
B	What is the sum of the coefficients of $3x$ minus $2y$, quantity raised to the fifth power?	<u>1</u>
C	What is the coefficient of the x squared y term in the expansion of $2x$ plus y , raised to the third power?	<u>12</u>
D	What is the coefficient of the x squared y cubed term in the expansion of $2x$ minus $3y$ raised to the fifth power?	<u>-1080</u>



Tossup D: Literature — Literature

<p>The last of the fifty cantos of this poem is an allegory for the Christianization of the country, when Marjatta eats a berry and gives birth to a son. The Republic of Karelia (<i>ka-reel-ya</i>) values this text highly, and the rise of Karelianism in the late 1800's is a function of the increased interest in that culture. It inspired Tolkien's <i>Silmarillion</i>, as well as several compositions of Jean Sibelius. Identify this poem, first published in 1835, the national epic of Finland.</p>	<p><u>The Kalevala</u></p>
--	-----------------------------------

Bonus D: Miscellaneous — Entertainment

<p>Give the titles of these famous rap or hip-hop songs.</p>		
<p>A</p>	<p>This 1979 song made National Public Radio's 100 Most Important Songs of the Twentieth Century. Recorded by the Sugarhill Gang, it was the first Rap song to go Gold.</p>	<p><u>Rapper's Delight</u></p>
<p>B</p>	<p>Originally recorded in 1975, and written by Steven Tyler and Joe Perry, its 1986 cover with Run DMC brought Rap into the mainstream.</p>	<p><u>Walk This Way</u></p>
<p>C</p>	<p>Sampling just a little bit of Rick James' "Superfreak", this single sold ten million copies in 1990. The only lyric you likely know is "Stophammertime!"</p>	<p><u>U Can't Touch This</u></p>
<p>D</p>	<p>Based on a Stevie Wonder song, this anti-violence piece opens with a quote of Psalms, Chapter 23, verse 4, and has a chorus which includes the words "Tell me why are we so blind to see, That the ones we hurt are you and me."</p>	<p><u>Gangsta's Paradise</u></p>



Tossup E: Math — Geometry (Computational: 30 Seconds)

You have a quadrilateral with vertices at (0,0), (10,0), (12,4), and (2,4). You also have a triangle which encloses the same area as the quadrilateral, and whose vertices are located at the points (0,0), (8,0), and (0,y). What is the value of y?	<u>10</u>
---	-----------

Bonus E: Social Studies — U.S. History

Answer these questions about the early years of the American Revolution.		
A	The Sons of Liberty actually replaced the padlock they broke while dumping 45 tons of cargo overboard during this 1773 event.	<u>Boston Tea Party</u>
B	The April, 1775 skirmishes at these two locations in Middlesex County, Massachusetts boosted Continental Army troop levels.	<u>Lexington and Concord</u>
C	In July, 1775, the Second Continental Congress sent this final appeal to King George blaming Parliament and corrupt officials for colonial grievances.	<u>Olive Branch Petition</u> (<i>accept <u>Humble Petition</u>, <u>Second Petition</u></i>)
D	The British executed Nathan Hale and nearly captured George Washington in Brooklyn following the August, 1776 battle on this island.	<u>Long Island</u>