



Tossup 1: Social Studies — U.S. History

It was first broken by the Wall Street Journal, though it failed to generate much public interest. Although the land in question was controlled by the Navy, they were convinced by Secretary of the Interior Albert Fall to transfer jurisdiction to his department. Fall in turn allowed Mammoth Oil to drill there in exchange for gifts. Name this 1920s scandal that disgraced the Harding administration.

Teapot Dome Scandal

Bonus 1: Math — Other

You roll two fair six-sided dice. What are the probabilities that the following occur?

A Both are fives.

1/36

B You roll a sum of ten.

1/12

C Both are prime.

1/4

D You roll the same number on each die.

1/6



Tossup 2: Miscellaneous — Sports

Wearing number 21, this thirteen year NBA veteran was involved in some controversial plays, most notably with teammates Greg Willard and Eddie Rush in Game 3 of the 2007 Suns-Spurs playoff game which Bill Simmons of ESPN called the worst game of the modern era. The controversy had died down until the FBI announced that he was under investigation for alleged betting, including games he was involved in. Identify this controversial former NBA referee.

Tim Donaghy (*DON-uh-hee*)

Bonus 2: Literature — Literature

Given a related group or character, name the author who created it.

A The White Council

J.R.R. Tolkien

B Dorian Gray

Oscar Wilde

C Violet Beauregarde

Roald Dahl

D Father Brown

G.K. Chesterton



Tossup 3: Literature — Literature

<p>His last known whereabouts were the city of Chihuahua, from which he sent a letter dated December 26, 1913, disappearing shortly afterward in Mexico while accompanying Pancho Villa's troops as an observer. Author of a story about a confederate sympathizer, An Occurrence at Owl Creek Bridge, identify this writer who lampoons political double talk in his Devil's Dictionary.</p>	<p>Ambrose Gwinnett <u>Bierce</u></p>
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Bonus 3: Science — Astronomy

Name these astronomers.		
A	This Greek astronomer wrote the famous treatise Almagest, detailing the motions of the stars.	<u>Ptolemy</u> of Alexandria
B	This Greek astronomer was the first to propose a heliocentric solar system and a very large universe.	<u>Aristarchus</u> of Samos
C	This Polish astronomer wrote "On the Revolutions of the Celestial Spheres," in which he again proposed a heliocentric solar system.	Nicolaus <u>Copernicus</u>
D	This Indian astronomer is the namesake of a mass limit equal to about 1.4 solar masses, above which certain stars will collapse.	Subrahmanyan <u>Chandrasekhar</u>



Tossup 4: Science — Biology

Composed of a corpuscle and a tubule, they come in both cortical and juxtamedullary (<i>JUX-tuh-meh-DOO-luh-ree</i>) varieties. The amount of water they retain can be altered by vasopressin, and they filter out salts and other substances by passing fluid through the glomerulus and loop of Henle. Name this functional unit of the kidneys.	<u>Nephron</u>
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Bonus 4: Social Studies — World History

Given a treaty and a year, identify the war it ended.	
A	Treaty of Westphalia, 1648. <u>Thirty Years War</u>
B	Treaty of Paris, 1763. <u>Seven Years War</u> (<i>prompt on French and Indian War</i>)
C	Treaty of Aix-la-Chappelle, 1748. <u>War of Austrian Succession</u>
D	Treaty of Versailles, 1919. <u>World War I</u>



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

Convert 1 1 0 0 1 (<i>one one zero zero one</i>) from base 2 to base 4.	<u>1 2 1</u> base 4
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Bonus 5: Fine Arts — Music

Identify the following French composers.		
A	This composer is most famous for Bolero. The work is notable for its snare drum ostinato rhythm.	Maurice <u>Ravel</u>
B	This composer is most famous for his opera Carmen, which features the Toreador song and the Habanera.	Georges <u>Bizet</u>
C	This composer's Prelude to the Afternoon of a Faun and set of 12 Preludes for piano are among the works that established him as a bridge between the Romantic period and modern music.	Claude <u>Debussy</u>
D	This composer's choral and orchestral symphonic setting of Romeo and Juliet was the most programmatic of his career. Other works include four cantatas written for the Prix de Rome competition.	Hector <u>Berlioz</u>



Tossup 6: Social Studies — Geography

Among its mountains is Mount Erbus, site of 257 deaths during a 1979 Air New Zealand crash. It is bordered by both the Ross and Weddell Seas, and a mountain range beginning near the convergence of the two effectively halves the mass according to the Prime Meridian. A 1979 treaty divided the claims of seven nations to the area, although the treaty has now grown to include 45 signatories. Name the southernmost continent, home to Little America.	<u>Antarctica</u>
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Bonus 6: Miscellaneous — Interdisciplinary

No one does Shakespearean movies like Kenneth Branagh, and none are better than his version of Hamlet. Identify the following actors who were also in that version.	
A	This star of Patch Adams and Mrs. Doubtfire makes an appearance as Osric. Robin <u>Williams</u>
B	He starred in Analyze This and both City Slickers movies and makes an appearance as a gravedigger. Billy <u>Crystal</u>
C	He appears in the beginning as Marcellus, and starred alongside Walter Matthau in Grumpy Old Men. Jack <u>Lemmon</u>
D	He portrays the Player King in the performance of 'The Murder of Gonzago', but is famous for a Biblical role. Charlton <u>Heston</u>



Tossup 7: Fine Arts — Visual Art

In 1968 this man was shot by Valerie Solanas, who worked at his famed "Factory." His works often featured famous people, and many of his creations were displayed in 1964 at an art show called "The American Supermarket," which was an apt name considering the types of works he created. Identify this pop artist who is notorious for his depiction of a Campbell's Soup can.	Andy Warhol (<i>accept Andrew Warhola</i>)
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Bonus 7: Math — Geometry

Solve the following geometry problems.	
A	Find the area of a square if its diagonal is 3. <u>9/2</u>
B	Find the area of an equilateral triangle if its perimeter is 18. <u>9 root 3</u>
C	Find the surface area of a cube if its diagonal is 2. <u>8</u>
D	Find the perimeter of an equilateral triangle if its area is 25 root 3 over 16. <u>15/2</u>



Tossup 8: Science — Chemistry

This group's existence was first proposed in 1945 by Glenn Seaborg. Six of them, including the last five, are named after scientists, and only two of these fifteen elements are naturally present on earth in significant quantities. Name this group of elements with partially-filled 5f orbitals, which is typically placed below the lanthanides.

Actinide(s) series (*accept actinoids*)

Bonus 8: Social Studies — U.S. History

Identify these facts related to a 1966 court case that led to the establishment of a certain set of rights for persons placed under arrest.

A The plaintiff was this man, who was coerced into confessing to crimes.

Ernesto Arturo Miranda

B The original arrest and court case took place in the state.

Arizona

C This chief justice delivered the Supreme Court's ruling.

Earl Warren

D This earlier court case, in which the state of Illinois was the defendant, allowed for attorneys to be present while suspects are being interrogated by the police.

Escobedo v. Illinois



Tossup 9: Math — Algebra (Computational: 30 Seconds)

Solve the following system of equations, and give your answer in the form of an ordered pair. $x + 5y = 10$, and $x + 3y = 2$.	<u>(-10, 4)</u>
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Bonus 9: Literature — Mythology

Mythological figures can be pretty vain. Answer the following about myths that prove it.	
A	After losing in a weaving contest, this goddess turned Arachne into a spider. <u>Athena</u>
B	When Pentheus banned the worship of this deity, he had his Maenads, which included Pentheus' own mother, rip him to pieces. <u>Dionysus</u>
C	When this hero came to take Persephone, Hades pretended to offer a feast, and upon sitting down found himself unable to get up. <u>Theseus</u>
D	This woman was so vain she believed herself to be above the gods, and called for the people of Thebes to worship her. In the end all fourteen of her children were killed and she transformed into a weeping rock. <u>Niobe</u>



Tossup 10: Literature — Literature

<p>This novel takes place entirely within London, and opens with a debate in scientific philosophy between a psychologist, a doctor, the provincial mayor, a young man, a man named Filby, and the unnamed protagonist. After traveling, the protagonist encounters a simple tribe of humans, freed from technology, and living a pastoral life in an Eden-like garden. Of course, these humans are nothing more than cattle, for their cannibalistic cousins. Name this novel that sees the protagonist search in vain for a socialist society somewhere in the future.</p>	<p><u>The Time Machine</u></p>
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Bonus 10: Science — Physics

Identify these terms related to waves.		
A	Commonly designated by lambda, this is the distance between two corresponding parts of a wave.	<u>Wavelength</u>
B	This is the amount of time a wave takes to go through a complete cycle.	<u>Period</u>
C	Measured in hertz, this is the number of cycles a wave goes through, every second.	<u>Frequency</u>
D	In a standing wave on a string, this is a point on the string that does not move.	<u>Node</u>

END OF FIRST HALF – 2 minute timeout



Tossup 11: Literature — Mythology

According to some sources, she is the mother of Orpheus. The oldest and wisest of her sisters, some sources list her and not Zeus as the arbiter between Aphrodite and Persephone over Adonis. Considered by some the inspiration for "The Iliad" and "The Odyssey", and thus called "Homer's Muse", this is which of the nine muses, typically associated with epic poetry.	<u>Calliope</u>
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Bonus 11: Miscellaneous — Interdisciplinary

Identify the following who were profiled in the book The 101 Most Influential People Who Never Lived.		
A	This title character at number eleven, became the embodiment of those who remained silent in the face of injustice. At least one president supposedly cited the book as having caused a war.	<u>Uncle Tom's Cabin</u>
B	Just behind Figaro on the list, at number 38, is this Japanese creation which breathed life into the dangers of testing and using nuclear weapons.	<u>Gojira</u> (<i>accept Godzilla</i>)
C	Once representing the most common of soldiers from the Greatest Generation, Vietnam nearly did him in until his triumphant comeback in the 1980s to fight a ruthless terrorist group.	<u>G. I. Joe</u>
D	Overcome by fumes in a mine, he awakens a twentieth century man in the twenty-fifth century, ready to fight evil as the prototypic sci-fi hero.	<u>Buck Rogers</u>



Tossup 12: Math — General

<p>This term was coined in 1975, referring to figures who have Hausdorff dimensions greater than their regular dimensions. They have recursive definitions, and are composed of smaller copies of themselves, like the Koch snowflake and Sierpinski triangle. Name this type of geometric figure which is self-similar, which was famously studied by Benoit Mandelbrot.</p>	<p><u>Fractal</u></p>
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Bonus 12: Social Studies — Geography

<p>Identify these South American bodies of water.</p>		
<p>A</p>	<p>This river that flows through Brazil is one of the longest and widest in the world.</p>	<p><u>Amazon</u></p>
<p>B</p>	<p>This lake that lies across two countries is the largest lake by volume in South America.</p>	<p><u>Lake Titicaca</u></p>
<p>C</p>	<p>This Venezuelan lake is the largest on the continent in terms of surface area.</p>	<p><u>Lake Maracaibo</u></p>
<p>D</p>	<p>This river is the longest in Venezuela.</p>	<p><u>Orinoco River</u></p>



Tossup 13: Science — Earth Science

<p>These regions are bordered by regions called tree lines. Classified as ET climates, they never have an average temperature above 10 Celsius, allowing the subsoil to remain as permafrost. As a result, trees cannot grow, and they are characterized mainly by mosses and shrubs. Name this type of climate typically located north of taigas.</p>	<p><u>Tundra</u></p>
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Bonus 13: Math — Algebra

Calculate the following regarding arithmetic sequences.		
A	The first term of a sequence whose tenth term is 50, and whose common difference is 3.	<u>23</u>
B	The common difference of a sequence whose third term is 1 and tenth term is 50.	<u>7</u>
C	The eighth term of a sequence whose fifth term is 10, and whose tenth term is 80.	<u>52</u>
D	The value of the smallest term greater than 100 for a sequence whose first term is 10 and common difference is 8.	<u>106</u>



Tossup 14: Miscellaneous — Entertainment

<p>Give the common name. The most famous film version of this novel was based on a 1927 Broadway stage version. An earlier 1922 German version had changed the characters and title, but was still ordered destroyed after losing a lawsuit to the author's estate. Identify this title character played on screen by Carlos Villarias (<i>vee-ya-ree-as</i>), John Carradine, Frank Langella, Richard Roxburgh, Christopher Lee, Gary Oldman, and twice and most famously by Bela Lugosi.</p>	<p>Count <u>Dracula</u></p>
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Bonus 14: Literature — Literature

<p>Given a description, name each of these literary works with related titles.</p>		
<p>A</p>	<p>Mentally-handicapped janitor Charlie Gordon undergoes a treatment that turns him into a genius, but the effect turns out to be only temporary.</p>	<p><u>Flowers for Algernon</u></p>
<p>B</p>	<p>Homer Barron is poisoned by the reclusive title character, whose iron-gray hair is found next to Homer's body in this nonlinear short story by Faulkner.</p>	<p>A <u>Rose for Emily</u></p>
<p>C</p>	<p>The light pink blossoms on the trees in this titular locale are sold at auction and cut down at the end of the play.</p>	<p>The <u>Cherry Orchard</u></p>
<p>D</p>	<p>Mushari is a scheming lawyer in this Vonnegut novel subtitled "Pearls Before Swine."</p>	<p><u>God Bless You Mr. Rosewater</u></p>



Tossup 15: Social Studies — World History

Many of this man's practices were detailed in his "Decree of War to the Death." At the Guayaquil Conference he met with Jose de San Martin for the first time, and they discussed how to free Peru. Name this man who was president of Gran Colombia and a "liberator" of many South American countries.	Simon <u>Bolivar</u>
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Bonus 15: Science — Chemistry

Name these laws of chemistry.		
A	This law of thermodynamics states that enthalpy changes are additive.	<u>Hess('s) Law</u>
B	This gas law states that volume and temperature are directly proportional.	<u>Charles('s) Law</u>
C	This law of thermodynamics states that if A and B are in thermal equilibrium, and B and C are too, then A and C are also in thermal equilibrium.	<u>Zereth Law of Thermodynamics</u>
D	This rule states that atoms are most stable with eight valence electrons, and form bonds to make this occur.	<u>Octet rule</u>



Tossup 16: Math — Geometry (Computational: 30 Seconds)

There are two concentric circles, one with radius 5, and the other with radius 3. The area in between those two circles is the same as the area of a square. What is the side length of that square?

4 root pi

Bonus 16: Fine Arts — Visual Art

Identify the following works of art that take place at night.

A More completely titled "The Company of Frans Banning Cocq and Willem van Ruytenburch," it features use of light to draw the viewers eyes to two characters, a lieutenant and a little girl.

The Night Watch

B Subtitled "The Execution of the Defenders of Madrid", it portrays a brutal scene with a firing squad.

The Third of May 1808

C This Picasso painting likely takes place at night, given that one ghostly figure is holding a candle, just above where a horse is being stabbed.

Guernica

D The bottom center part of this painting shows the village of Saint-Rémy, and the top of a poplar tree is visible in the foreground slightly to the left of center.

The Starry Night



Tossup 17: Literature — Literature

The title character endures two shipwrecks as well as a pirate takeover. At one point he befriends a Portugese ship captain and with his help becomes a plantation owner. After his second shipwreck, he discovers that there are native Cannibals who trap and eat prisoners. He frees one of those prisoners, teaches him English and converts him to Christianity, naming him after the day he met him, Friday. Probably influenced by the real-life events of Alexander Selkirk, a castaway who lived more than four years on a Pacific island, identify this work written by Daniel Defoe.

Robinson Crusoe

Bonus 17: Math — Algebra

Simplify the following expressions relating to logarithms. If a logarithm remains in the answer, it should only be the logarithm of x , without any operations within the logarithm.

A	The log base 3 of 729.	<u>6</u>
B	The log base 5 of $125x$.	<u>$3 + \log \text{ base } 5 \text{ of } x$</u>
C	The log base 5 of $125x$ squared.	<u>$3 + 2 \log \text{ base } 5 \text{ of } x$</u>
D	The natural log of the quantity e times x to the e .	<u>$1 + e \text{ times the natural log of } x$</u>



Tossup 18: Science — Physics

Also known as the Hertz effect, it was not explained well until 1905 by Albert Einstein. Different metals have different threshold frequencies above which incident photons can give atoms enough energy to eject electrons. An important proof that light is quantized, name this phenomenon by which a current is induced in metal when light is shined on it.	<u>Photoelectric effect</u>
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Bonus 18: Social Studies — Current Events

Given a description, name the current member of the United States Supreme Court.		
A	This Justice, the successor to William Rehnquist, recently characterized low judicial salaries as a "constitutional crisis".	John <u>Roberts</u>
B	The only African-American on the court, he was accused of sexually harassing Anita Hill during his confirmation hearings.	Clarence <u>Thomas</u>
C	This former American Civil Liberties Union lawyer is now the only woman on the Court.	Ruth Bader <u>Ginsburg</u>
D	This man, appointed by Gerald Ford, is the oldest serving member of the Court.	John Paul <u>Stevens</u>



Tossup 19: Fine Arts — Music

<p>It is dedicated to Viktor Hartmann, an artist and architect. The 15 movements of the suite include five promenade movements and a movement inspired by Baba-Yaga. Originally a piano work, it was orchestrated famously by Nikolai Rimsky-Korsakov and Maurice Ravel. Identify this symphonic poem, whose most famous movement depicts one of Hartmann's architectural drawings, The Great Gate of Kiev, composed by Modest Mussorgsky.</p>	<p><u>Pictures at an Exhibition</u></p>
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Bonus 19: Science — Biology

Identify these parts of the human brain.		
A	This structure connects the left and right hemispheres of the brain.	<u>Corpus callosum</u>
B	Also known as gray matter, this is the outside surface of the brain, which has many deep folds.	<u>Cerebral cortex</u>
C	Meaning "little brain," this structure at the back of the brain helps regulate equilibrium, motor coordination, and sensory perception.	<u>Cerebellum</u>
D	This part of the brain consists of the pons, medulla oblongata, and midbrain, and is attached to the spinal cord. It primarily regulates basic, involuntary functions like breathing.	<u>Brain stem</u>



Tossup 20: Social Studies — U.S. History

<p>The plaintiff in this case initially won on a technicality, but he lost in subsequent tries. He had traveled from Missouri, to Illinois, to the Wisconsin territory, and back to Missouri, so he thus claimed that since he had lived in a free state as a free man, he could no longer be a slave. Name this 1857 court case in which Chief Justice Roger Taney argued that African Americans could not have rights equal to those of a white citizen.</p>	<p>Dred Scott v. Sanford (<i>prompt Dred Scott</i>)</p>
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Bonus 20: Literature — Literature

<p>Identify the following pertaining to George Orwell.</p>		
<p>A</p>	<p>Much to his dismay, he once found this 1945 allegory featuring Boxer, Snowball, and Squealer in the children's section of a bookstore.</p>	<p><u>Animal Farm</u></p>
<p>B</p>	<p>Orwell was a pen name; this was his given name.</p>	<p>Eric Arthur <u>Blair</u></p>
<p>C</p>	<p>Orwell became a Socialist after fighting in this war, which was also the inspiration behind Picasso's "Guernica."</p>	<p><u>Spanish Civil War</u></p>
<p>D</p>	<p>This Orwell story examined poverty in Northern Europe in the period before the Second World War.</p>	<p>The <u>Road to Wigan Pier</u></p>

END OF MATCH



Tossup A: Literature — Literature

<p>Meeting for more than 20 years at the Eagle and Child public house on Giles Street, this group consisted of several well-known academics at Oxford. Members would gather to read unfinished works written by members and discuss fantasy writing. It was parodied by member J.R.R. Tolkien in his novel "The Notion Club Papers." Name this group of writers that included Tolkien and his son Christopher, as well as Eric Rucker Eddison, Lord David Cecil, and C.S. Lewis.</p>	<p>The <u>Inklings</u></p>
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Bonus A: Fine Arts — Visual Art

Given a work, identify the British artist who painted it.		
A	Blue Boy	Thomas <u>Gainsborough</u>
B	The Hay Wain	John <u>Constable</u>
C	A Rake's Progress	William <u>Hogarth</u>
D	Eruption of Vesuvius	Joseph Mallord William <u>Turner</u>



Tossup B: Science — Biology

Degradation of this causes the effects of multiple sclerosis and Guillain-Barre syndrome. Supplied by Schwann cells, its insulating properties, as well as gaps in it called the nodes of Ranvier, allow electrical impulses to jump between nodes, making transmission of nerve signals significantly faster. Name this fatty material which surrounds the axons of nerve cells in a type of sheath.	<u>Myelin sheath</u>
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Bonus B: Social Studies — U.S. History

Identify these facts related to the beginning of the first transcontinental railroad.	
A	This Plains city was the eastern terminus of the railroad. <u>Omaha, NE</u>
B	The company began building the tracks in the east and headed west. <u>Union Pacific</u>
C	The company began building the tracks in the west and headed east. <u>Central Pacific</u>
D	The two tracks merged to create the final railroad in 1869 in this state. <u>Utah</u>



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

Find the length of the altitude from largest angle to longest side of a triangle with side lengths 8, 8 and $8\sqrt{2}$. It may help you to know that the relationships between side lengths indicate a 45-45-90 degree right triangle.	<u>$4\sqrt{2}$</u> units
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Bonus C: Science — Earth Science

Identify these meteorological terms.	
A	This is a cloud at ground level. <u>Fog</u>
B	This is an extended period of time with low precipitation. <u>Drought</u>
C	These are the low tides experienced when the sun and moon partially cancel out each other's tidal effects. <u>Neap tide</u>
D	This term refers to a prevailing wind that lasts for several months every year. It also refers to the large seasonal rainfall associated with that season. <u>Monsoon</u>



Tossup D: Social Studies — Other

<p>The expression "there is no such thing as a free lunch" is central to this term, as it demonstrates necessary tradeoffs. Often divided into three categories -- for whom, what, and how -- it is created by dividing the decrease of a quantity over the increase of a quantity. Identify this term from economics that is the price of the alternative option that is most highly valued.</p>	<p><u>Opportunity cost</u></p>
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Bonus D: Math — General

Name these Boolean operators.		
A	This returns 1 if both the inputs are 1.	<u>AND</u>
B	This returns 1 if either input is 1.	<u>OR</u>
C	This returns 1 if one input is 1, but not both.	<u>XOR</u>
D	This returns 1 if neither input is 1.	<u>NAND</u>



Tossup E: Miscellaneous — Entertainment

<p>This play features psychiatrist Martin Dysart trying to treat seventeen-year-old Alan Strang. Strang is a passionate young man being treated for animal mutilations, despite a professed love for the animals. Somewhat controversial for its on-stage nudity, identify this Tony Award winning play by Peter Shaffer, which became more controversial when throngs of teenage girls rushed to see the play in London when the role of Strang was taken over by Daniel Radcliffe.</p>	<p><u>Equus</u></p>
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Bonus E: Literature — Literature

<p>Identify these locations from J.R.R. Tolkien's Middle-Earth.</p>	
<p>A</p>	<p>This river forms the eastern border of the Shire and is crossed by a well-known bridge.</p> <p><u>Brandywine River</u> (<i>accept Baranduin</i>)</p>
<p>B</p>	<p>This region is inhabited by a society of horsemen who have an uneasy alliance with Gondor.</p> <p><u>Rohan</u></p>
<p>C</p>	<p>This was the original name of Mirkwood, the forest east of the Misty Mountains.</p> <p><u>Greenwood</u></p>
<p>D</p>	<p>In this mountain range lies the source of the "great" river Anduin.</p> <p><u>Grey Mountains</u> (<i>accept Ered Mithrin</i>)</p>