QQBC Packet 21

1.  **This leader’s policies were protested by the Lincolnshire Rising. Thomas Cromwell helped this man dissolve his country’s monasteries, beginning two years after his 1534 Act of Supremacy made him the head of the (\*)** Church of England. This man broke with Rome thanks in part to Pope Clement VII’s refusal to grant him an annulment. For ten points, name this English king from the House of Tudor who married Catherine of Aragon, Anne Boleyn, and four other women.  
  
ANSWER: Henry VIII (prompt on “Henry”)   
  
<HIST, EURO>

For ten points each, name the following important ships in early American history.  
  
The first Pilgrims, including William Bradford, arrived in Cape Cod in 1620 aboard this ship. ANSWER: Mayflower  
  
In 1839, slaves aboard this ship overthrew the crew and ordered the ship sailed back to Africa; instead, the crew sailed to New York, leading to an 1841 Supreme Court case in which the slaves were freed.  
  
ANSWER: La Amistad  
  
In June 1772, this British anti-smuggler boat ran aground off the coast of Rhode Island and was controversially burned by angry colonists.  
  
ANSWER: HMS Gaspee ([gas-pay], but be lenient)  
  
<HIST, AMER>

2.  **The Casparian strip acts as a screen within the cortex of this structure, and the strangler fig kills trees by growing the adventitious type. Mycorrhizae [my-kuh-RYE-zee] are symbiotic relationships between fungi and these plant organs, which can harbor (\*)** nitrogen-fixing bacteria nodules. The carrot is a tap variety of, for 10 points, what commonly underground plant structures that absorb water and nutrients and support the plant in the ground?   
  
Answer: roots   
  
<SCI, BIO>

Giovanni Schiaparelli’s discovery of these structures in 1877, and the ensuing mistranslation from his Italian, inspired many science fiction writers to speculate about the existence of life. For ten points each,  
  
[10] Name these hypothesized paths that were supposedly caused by the flowing of liquid water. The Mariner missions proved that these canyon-like natural features did not exist.  
  
ANSWER: canals or channels (accept canali; accept, but do not otherwise reveal, descriptions of canals on Mars)  
  
[10] Schiaparelli’s canals were discovered on this “Red Planet,” which is orbited by Phobos and Deimos.  
  
ANSWER: Mars  
  
[10] The mistake of the canals was deemed to be one of these tricks of the eye. The “Face on Mars” is another one of these images, which the brain interprets as something it is not.  
  
ANSWER: (optical or visual) illusion  
  
<SCI, OTHER>

3.  **The speaker of this poem believes that his visitor’s “only stock and store / caught from some unhappy master” is the response to his question “is there balm in Gilead?” This poem’s title figure taps on a window to be let in, and perches “upon a (\*)** bust of Pallas,” evidently never to leave. The speaker tries to forget about a “radiant maiden” named Lenore, but is tormented by the title bird, who repeatedly caws “nevermore.” For ten points, name this poem by Edgar Allen Poe.  
  
ANSWER: The Raven  
  
<LIT, AMER>

Examples of these mathematical entities include x to the first power and x to the second power, but not x to the three-halves power. For 10 points each,   
  
[10] Name this type of expression that involves only addition and multiplication of real numbers and variables with positive integer exponents.   
  
Answer: polynomial (accept monomial)   
  
[10] Information about the roots of a polynomial can be found quickly by finding this quantity. For the quadratic polynomial a x squared plus b x plus c, this quantity is equal to b squared minus 4 a c.   
  
Answer: discriminant   
  
[10] When a polynomial f(x) [f of x] is divided by (x-a) [x minus a], it will either factor or leave this quantity, which, according to an important theorem, is then equal to f(a) [f of a].   
  
Answer: remainder (accept Remainder Theorem)   
  
 <SCI, OTHER>

4.  **Competing populations of species in this phylum are used to measure climate change in Antarctica’s dry valleys. The fungus Arthrobotrys [ar-throw-BAH-tris] grows nets to catch soildwelling members of this phylum, which also includes the model organism C. elegans and the parasite that causes (\*)** heartworm infection in pets. For 10 points, name this phylum, whose members have external cuticles and cylindrical bodies and which is commonly known as roundworms.   
  
Answer: Nematoda (accept nematodes, accept roundworms before mentioned)   
  
<SCI, BIO>

Leon Battista Alberti wrote a Renaissance treatise on this technique. For 10 points each:   
  
[10] Name this visual art technique involving making works appear as if they were seen by the naked eye. An example is foreshortening.   
  
Answer: perspective   
  
[10] Michelangelo enlarged Mary to take advantage of his viewers’ perspective in this sculpture that shows a young Mary holding the crucified body of Christ. It is his only signed work.   
  
Answer: Pietà   
  
[10] This artist used perspective to create paintings of crowded scenes like The Supper at Emmaus and The Calling of St. Matthew.   
  
Answer: Michelangelo Merisi da Caravaggio   
  
<FA, VISUAL>

5.  **The majority of these animals have anisodactylic toes and are called passerines. Though these organisms evolved independently of mammals, they are still endothermic vertebrates with four-chambered hearts. Unlike their ancestor (\*)** Archaeopteryx, these migratory animals lack teeth. Hard eggs and light skeletons are characteristics of, for ten points, what class of feathered animals that includes the flightless cassowary and ostrich?  
  
ANSWER: birds (accept Aves)  
  
<SCI, BIO>

After failing to accomplish this event with a bomb, Nedeljko Cabrinovic [neh-dyell-koh kah-breenoh-vich] failed to commit suicide by swallowing weak cyanide and jumping into a five-inch deep river.   
  
For 10 points each,   
  
[10] Name this June 28, 1914 event that was accomplished by Gavrilo Princip. It triggered anti-Serbian demonstrations in Austria-Hungary, the July Crisis, and, eventually, World War I.   
  
Answer: assassination (or murder or equivalents) of Franz Ferdinand (prompt on partial answer) [10] The assassination took place in this Austro-Hungarian city, now the capital of Bosnia and Herzegovina.   
  
Answer: Sarajevo   
  
[10] Princip was a member of this pro-Serbian terrorist group, which organized the attack of Franz Ferdinand's motorcade.   
  
Answer: Black Hand (or Unification or Death; accept Young Bosnia)   
  
<HIST, EURO>

6.  **The formula for Euclidean distance between two points is derived from this theorem. James Garfield drew a trapezoid to begin his proof of this theorem. Sets of positive integers that satisfy this formula are known as namesake (\*)** "triples," including 3, 4, and 5. For 10 points, name this geometric theorem, named for an ancient Greek mathematician, that compares the sides of a right triangle, often written as a squared plus b squared equals c squared.   
  
Answer: Pythagorean theorem (prompt on "a squared plus b squared equals c squared" before mentioned)   
  
<SCI, OTHER>

The hero of this Old English poem steals a giant’s sword from a witch’s underwater lair, but its blade melts away when he beheads her. For ten points each,  
  
Name this anonymously-authored epic poem, in which the title Geatish [”gate”-ish] warrior defeats a monstrous descendant of Cain, and that monster’s mother, to defend the mead-hall Heorot [HAY-oh-roht].  
  
ANSWER: Beowulf  
  
Name the monster that kills King Hrothgar’s [hROTH-gahr’s] men in his repeated raids on Heorot. Although swords do not pierce this monster’s flesh, Beowulf rips off this creature’s arm, and he bleeds to death.  
  
ANSWER: Grendel  
  
When Beowulf is summoned by Hrothgar to defend Heorot, the warrior Unferth tells the story of Beowulf winning a swimming contest against this son of Beanstan [BAY-an-stan], Beowulf’s childhood friend.  
  
ANSWER: Breca  
  
<LIT, BRIT>

7.  **A character in this work has a son named Reizei with his step-mother, whose niece he kidnaps and eventually marries. This work’s protagonist falls in love with Yugao, who is killed by the spirit of one of his mistresses. This novel’s title character falls in love with Lady (\*)** Fujitsubo due to her resemblance to his mother. For ten points, name this Heian-era Japanese novel by Murasaki Shikibu bo] about the adventures of an egotistical “shining” prince.  
  
ANSWER: The Tale of Genji (accept Genji Monogatari)   
  
<LIT, OTHER>

Seventy-five million years ago, this being killed billions of aliens by exploding hydrogen bombs inside volcanoes. For ten points each,  
  
[10] Name this dictator of the Galactic Confederacy. The souls of those aliens are called thetans in a 20th century religious story, in which this being is said to be locked in a mountain prison somewhere.  
  
ANSWER: Xenu (accept Xemu)  
  
[10] The Xenu story is “Incident II” in the mythos of this belief system, proposed by L. Ron Hubbard as the basis of a church he founded in the 1950s. You can give either the name of the church or the pseudoscientific philosophy it is based on.  
  
ANSWER: (Church of) Scientology or Dianetics  
  
[10] This U.S. state is home to Church of Scientology headquarters near San Jacinto, and to numerous Scientology facilities in Hollywood.  
  
ANSWER: California  
  
<RMPSS, REL>

8.  **In this series of novels, Eustace and Jill travel from Experiment House to the title land, where the gods Bacchus and Silenus help the father of Rillian reclaim his throne. In a novel from this series, Mr Tumnus does not surrender a “Daughter of Eve” to the (\*)** White Witch, allowing her and the other Pevensie children rule from Cair Paravel with the help of the lion Aslan. Prince Caspian and The Lion, the Witch, and the Wardrobe are from, for ten points, what series of fantasy novels by C.S. Lewis?  
  
ANSWER: The Chronicles of Narnia  
  
<LIT, BRIT>

In a novel by this author, Martians inject the blood of Earth creatures into their bodies as nourishment, but die out when they are unable to defend themselves against Earth diseases. For ten points each,  
  
Name this early science fiction author of The War of the Worlds, who wrote about Dr Kemp witnessing the beating death of his former schoolmate, Griffin, in The Invisible Man.  
  
ANSWER: H(erbert) G(eorge) Wells  
  
In this HG Wells novel, an unnamed scientist appears suddenly at a dinner party and tells about his travels among the dainty Eloi and the brutish, subterranean Morlocks, theorizing that they are descended from his contemporary upper and lower classes, respectively.  
  
ANSWER: The Time Machine  
  
In this Wells novel, Edward Prendick is rescued after a shipwreck and taken to a barbaric laboratory, in which the title scientist vivisects animals to create bizarre half-human creatures.  
  
ANSWER: The Island of Doctor Moreau  
  
<LIT, BRIT>

9.  **This designer of a planned community at Arthurdale resigned from the D.A.R. and arranged a concert at the Lincoln Memorial for Marian Anderson. This first chair of the UN Commission on Human Rights helped develop the Universal Declaration of Human Rights, which included the (\*)** “Four Freedoms” proposed by her husband. For 10 points, name this First Lady, the wife of Franklin D. Roosevelt.   
  
Answer: Eleanor Roosevelt (accept Eleanor alone after “Roosevelt” is read)   
  
<HIST, AMER>

He wrote “All animals are equal, but some are more equal than others” in one work. For 10 points each,   
  
[10] Identify this author of Animal Farm who wrote about Winston Smith, O’Brien, and Big Brother in 1984.   
  
Answer: George Orwell or Eric Arthur Blair   
  
[10] Orwell wrote about shooting this animal in Burma. Kipling created Hathi, one of these animals, in The Jungle Book. In Just So Stories, one of these animals elongates its nose to escape a crocodile.   
  
Answer: elephant   
  
[10] Orwell called this author’s A Passage to India “the best [novel about India] we are likely to get.” This author also wrote A Room with a View and Howard’s End.   
  
Answer: E(dward) M(organ) Forster   
  
<LIT, BRIT>

10.  **In the "Theory of Composition," this poem's author explains why this poem's "Prophet" seems like "a demon that is dreaming" but can only say one word. The speaker asks the title creature to return to “Night’s Plutonian shore,” but it stays on the “pallid bust of (\*)** Pallas” in his room. This poem's speaker laments the loss of “dear Lenore” while the title bird repeats “nevermore” in, for 10 points, what poem by Edgar Allan Poe?   
  
Answer: The Raven   
  
<LIT, AMER>

This statistical quantity can be calculated by taking the average of the squared elements of a data set, minus the square of the average of the data set. For 10 points each,   
  
[10] Name this measure of how spread out a data set is, measured in the square of the unit of the original set. For that reason, the standard deviation, which is the square root of this quantity, is more commonly used in analysis.   
  
Answer: (population or sample) variance   
  
[10] This other measure of spread is less informative than variance or standard deviation, but it is far easier to calculate; simply take the largest value in the set, minus the smallest value in the set.   
  
Answer: range   
  
[10] The range may be an inaccurate measure of how spread out a data set is if the set includes a point that is very large or very small compared to the rest of the set; this term describes such a point.   
  
Answer: outlier   
  
<SCI, OTHER>

11.  **This political party’s primary office was organized by Martin Bormann, the private secretary of its leader. Kurt Georg Kiesinger led the Christian Democrats and served as Chancellor in the 1960s despite his former membership in this political party. The (\*)** SS and SA were paramilitary wings of this party, whose propaganda was organized by Joseph Goebbels. For ten points, name this socialist political party that ruled the Third Reich of Germany under Adolf Hitler.  
  
ANSWER: Nazi Party (accept National Socialist German Workers’ Party or NS(DA)P; accept Nazi Germany; do not accept “Socialists” alone; do not accept “Fascists”)   
  
<HIST, EURO>

Enjolras [on-johl-RAH] leads the Friends of the ABC in this novel. For 10 points each,   
  
[10] Identify this novel, in which Jean Valjean [jahn val-JAHN] is pursued by Inspector Javert [zhah-  
  
VAYR]. Valjean raises Fantine’s daughter Cosette after Fantine dies in this novel.   
  
Answer: Les Misérables   
  
[10] This French author wrote Les Misérables [lay mis-ay-RAHB]. He wrote about the bell-ringer Quasimodo and the gypsy Esmeralda in The Hunchback of Notre Dame.   
  
Answer: Victor Marie Hugo   
  
[10] In Les Misérables, this plucky young boy leaves the barricade to collect rifle cartridges and is shot by the French National Guard.   
  
Answer: Gavroche Thénardier (prompt on Thenardier)   
  
<LIT, EURO>

12.  **This city is home to the Tsing Ma Bridge, and more than 100,000 people live on its Lantau Island. This city, south of Shenzhen on the Kowloon Peninsula, was ceded to Britain in the Treaty of Nanking. This large city on the Pearl River Delta lies east of (\*)** Macau, a "Special Administrative Region" like this city. For 10 points, name this city, which has existed as “one country with two systems” since it was transferred to Chinese ownership in 1997.   
  
Answer: Hong Kong   
  
<HIST, WORLD>

Answer some questions about motherly goddesses, for 10 points each.   
  
[10] This Greek equivalent of Vesta is actually a virgin, but was the goddess of family as well as the home and hearth. Answer: Hestia   
  
[10] This Egyptian goddess is sometimes known as the mother of Ra. She is symbolized by a cow and represents motherhood.   
  
Answer: Hathor   
  
[10] The female member of the Egyptian creator pair, Nut [noot], represents this region. She is often painted blue, and arches over her husband, Geb, who represents the Earth.   
  
Answer: sky (accept the stars, the heavens, or other equivalents)   
  
<RMPSS, MYTH>

13.  **This quantity is measured by a hygrometer and is found by relating the partial pressure of water vapor to the vapor pressure of liquid water. This quantity is maximized when the air temperature is equal to the dew point, when condensation will occur. It is often given as a (\*)** percentage in weather reports, where it is combined with temperature to calculate the heat index. For 10 points, give this measure of the level of water vapor in the air.   
  
Answer: relative humidity   
  
<SCI, OTHER>

This Royal Navy Commander first appeared in the novel Casino Royale. For 10 points each,   
  
[10] Name this British secret agent, also known as 007 [“double-oh-seven”], who appears in many Ian Fleming works.   
  
Answer: James Bond   
  
[10] In this author’s novel The Secret Adversary, the detectives Tommy and Tuppence work with British intelligence agent Mr. Carter. This author also created the detectives Hercule Poirot [ayr-KYOOL pwahROH] and Miss Marple.   
  
Answer: Dame Agatha Mary Clarissa Christie   
  
[10] This British author based his novel Ashenden: Or the British Agent on the time he spent as a secret agent. He also wrote about the club-footed Philip Carey in Of Human Bondage.   
  
Answer: W(illiam) Somerset Maugham [mawm]   
  
<LIT, BRIT>

14.  **For a given triangle, there exists one of these shapes that passes through its sides’ midpoints, its altitudes’ feet, and three other significant points. You cannot draw one of these shapes through a non-square rhombus’s four vertices; as a result, those rhombuses are not (\*)** cyclic. An ellipse with both focuses at the same point is essentially, for ten points, what shape, defined as all points an equal distance away from a center, through which a diameter can be drawn?   
  
ANSWER: circle  
  
<SCI, OTHER>

This author wrote about Peter, Martin, and Jack, who represent different factions of Christianity in A Tale of a Tub. For ten points each,  
  
[10] Name this satirist, who also wrote a novel in which a sailor visits the nations of Lilliput, Blefuscu, and Laputa.  
  
ANSWER: Jonathan Swift  
  
[10] Jonathan Swift also wrote this novel, in which the title character goes on fantastical journeys to Lilliput, where he is a giant, and Brobdingnag, where he is tiny.  
  
ANSWER: Gulliver’s Travels (accept Travels into Several Remote Nations of the World, in Four Parts. By Lemuel Gulliver, First a Surgeon, and then a Captain of several Ships)  
  
[10] Swift’s satirical essay A Modest Proposal suggests that the people of this nation, his home country, should sell their children as meat to help them survive the Potato Famine.  
  
ANSWER: Ireland (accept Eire)  
  
<LIT, EURO>

15.  **This man, while imprisoned for blaspheming, wrote another controversial pamphlet, No Cross, No Crown. Shortly after this man assisted George Fox in the purchase of West and East Jersey, King Charles II granted this man a larger tract of land, where he began a (\*)** “Holy Experiment” for persecuted minorities, led by the Religious Society of Friends. For ten points, name this Quaker, the founder of an American colony led from Philadelphia.  
  
ANSWER: William Penn  
  
<HIST, AMER>

Free radicals catalyze a reaction that converts this compound into a diatomic form; as a result, this compound can be depleted from the atmosphere through certain air pollution. For ten points each,  
  
Name this triatomic form of oxygen, which provides atmospheric protection against harmful solar radiation.   
  
ANSWER: ozone (prompt on O3)  
  
A protective layer of ozone exists in this region of Earth’s atmosphere, which lies just above the troposphere.  
  
ANSWER: stratosphere  
  
Ozone in the stratosphere absorbs radiation in this band of the electromagnetic spectrum; as a result, temperatures are higher at the top of the stratosphere than they are at the bottom. This type of radiation has wavelength just shorter than that of visible light.  
  
ANSWER: ultraviolet radiation (accept UV)   
  
<SCI, OTHER>

16.  **This force is related to an accelerating observer by the Equivalence Principle of general relativity. Its fields can be visualized as wells, which spacecraft can use to speed up using this force as a (\*)** “slingshot.” Galileo demonstrated that the effects of this force are constant using two balls of different masses. For ten points, name this force that accelerates objects at 9.81 meters per second squared toward the Earth.  
  
ANSWER: gravity (accept gravitational force)   
  
<SCI, PHYS>

This advocate for landmine removal was killed in August 1997, a week before Mother Teresa’s death. For ten points each,  
  
Name this member of the British royal family, the first wife of Prince Charles. After her death, Elton John re-wrote the song “Candle in the Wind” as a tribute.  
  
ANSWER: Princess Diana  
  
Princess Diana was killed in this sort of accident. An official investigation blamed the intoxicated Henri Paul for causing it, rather than the paparazzi who had pursued Princess Di.  
  
ANSWER: car crash (accept equivalents that automobile accidents)  
  
The car crash took place in a tunnel near the Pont de l’Alma bridge in this European city.  
  
ANSWER: Paris   
  
<HIST, BRIT>

17.  **In this state, a white mob led a 1921 firebombing of the Greenwood district, then the wealthiest African-American community in the country. In 2013, an F5 tornado killed 24 people in this state’s city of Moore. Terry (\*)** Nichols was a conspirator in a 1995 act of domestic terrorism in this state, in which 168 people were killed in the Alfred P. Murrah building by Timothy McVeigh. For ten points, name this state, the site of the 1921 Tulsa race riots.  
  
ANSWER: Oklahoma  
  
<HIST, AMER>

This power was the subject of the 2005 Supreme Court case Kelo v. City of New London, which resulted in ninety acres of homes being bulldozed; after the Great Recession, the land currently sits vacant. For 10 points each,   
  
[10] This two word phrase refers to the power of local governments to seize private property for public use, such as the building of schools.   
  
Answer: eminent domain   
  
[10] The city of New London is about an hour's drive southeast of this state's capital city of Hartford.   
  
Answer: Connecticut   
  
[10] In 1965, the Supreme Court ruled in favor of Estelle Griswold, a Planned Parenthood director who argued that Connecticut's ban on this type of medicine was illegal. Foreshadowing Roe v. Wade's legalization of abortion, the Supreme Court argued that the ban on this type of health care violated the right to privacy.   
  
Answer: contraception (accept birth control and any other equivalent that describes the prevention of pregnancy; prompt on “the pill;” do not accept “abortion”)   
  
<HIST, AMER>

18.  **This man stabbed Henry Rathbone to begin his escape. Boarding house owner Mary Surratt was one of four people hanged for conspiring with this man, who was shot and killed in a burning barn. Samuel Mudd was arrested for treating this man's (\*)** leg, which was broken after he fell to the stage of Ford's Theater, shouting "Sic semper tyrannis!" For 10 points, name this actor and Confederate supporter who, on April 14th, 1865, shot and killed Abraham Lincoln.   
  
Answer: John Wilkes Booth   
  
<HIST, AMER>

For 10 points each, name the following popular American composers.   
  
[10] This longtime conductor of the U.S. Marine Band earned the title "The March King" for works like "The Liberty Bell" and "The Stars and Stripes Forever." He also invented a marching tuba that is now named for him.   
  
Answer: John Philip Sousa (accept Sousaphone)   
  
[10] This composer's "Hoe-down" from his ballet Rodeo was used in commercials for beef; he also wrote the Fanfare for the Common Man and the music for the ballet Appalachian Spring.   
  
Answer: Aaron Copland   
  
[10] This king of Ragtime music wrote classic piano rags like The Entertainer and the Maple Leaf Rag.   
  
Answer: Scott Joplin   
  
<FA, AUDIO>

19.  **Three atoms of this element are present in acetone, the simplest ketone; one of those atoms is double bonded with oxygen. This element’s four valence electrons allow it to form four bonds with other elements. This element’s allotropes include (\*)** diamond, graphite, and stable nanotubes, and its 14-amu isotope is used in radiometric dating. For ten points, name this element, the focus of organic chemistry, with atomic number 6 and atomic symbol C.  
  
ANSWER: carbon (accept C before it is read)   
  
<SCI, CHEM>

[MODERATOR: Do not reveal the alternate answers to part 1 if they are not given by players] This structure was likely built on or near its namesake Mount in Jerusalem. For 10 points each,   
  
[10] Name this building, which was planned by a warlike King of Israel and built by his son. This building housed the Ark of the Covenant, which had formerly rested in the Tabernacle of Moses.   
  
Answer: First Temple (accept Solomon’s Temple or Temple of Solomon; prompt on “Temple in   
  
Jerusalem;” prompt on “Holy Temple;” prompt on “Temple” alone)   
  
[10] The First Temple was built by this wise King of Israel, who consorted with the Queen of Sheba and discovered a child’s real mother by threatening to cut the baby in half.   
  
Answer: King Solomon (accept Schlomo; accept Suleyman; accept Jedediah)   
  
[10] Solomon was Bathsheba’s second son by this king, who defeated the giant Goliath as a young man. Answer: King David (accept Dawud)   
  
<RMPSS, REL>

20.  **This empire’s history is depicted in the Mendoza Codex and Florentine Codex, and it engaged in a ritualistic, melee-only form of combat known as a Flower War. Invaders of this empire fled its capital during La Noche Triste [no-chay tris-tay], shortly after they executed its leader, (\*)** Montezuma. A triple alliance of Tlacopan, Texcoco [tesh-koh-koh], and Tenochtitlan [teh-nohsh-TEET-lon] grew into, for ten points, what empire that was based in modern-day Mexico until it was conquered in 1521 by Hernan Cortes?  
  
ANSWER: Aztec empire  
  
<HIST, WORLD>

ICE tables can be used for calculations involving reactions in this state. For 10 points each, [10] Name this condition in which a forward reaction occurs at the same rate as the reverse reaction. Reactions in this condition are depicted with two half-headed arrows.   
  
Answer: equilibrium   
  
[10] This principle of equilibrium chemistry states that when a reaction experiences a change in pressure, temperature, concentration, or volume, it will shift to counteract that change.   
  
Answer: Le Chatelier’s [luh sha-tell-YAY’s] principle   
  
[10] While adding one of these may increase reaction rate, it won’t change the equilibrium or equilibrium constant, as it increases the reverse reaction rate just as much as the forward rate.   
  
Answer: catalyst   
  
<SCI, CHEM>