## 春 HSAPQ <br> High School Academic Pyramid Questions <br> Tossups

1. One character in this work claims he will "never forget this carrot," and another sings a song about dogs digging a tomb. Another character goes blind between two appearances, and another repeatedly attempts to remove his boot. The removal of one character's hat causes him to stop a nonsensical monologue that began when he was instructed to think; that character, Lucky, is kept on a leash by Pozzo. The phrase "yes, let's go" is spoken by both Vladimir and Estragon, but they continue the title action. For 10 points, name this absurdist play by Samuel Beckett.
ANSWER: Waiting for Godot [or En attendant Godot]
2. This man presided over the Supreme Court following the election of Ignacio Comonfort, and his namesake law of 1855 declared all citizens equal before the law. His Plan of Ayutla was a call for a liberal revolution, and he refused to commute the death sentence of Emperor Maximilian following Maximilian's defeat at the Battle of Puebla. For 10 points, name this five-time Mexican president, the first of indigenous descent, who lends his name to the city across the Rio Grande from El Paso. ANSWER: Benito Juarez
3. He became leader of his current party by defeating Kim Beazley in 2006, and he earned the nickname "Dr. Death" while serving as chief of staff to Wayne Goss. He served as his nation's Shadow Minister of Foreign Affairs from 2001 to 2005, and issued an apology to the Stolen Generations in February 2009. He campaigned on promises to remove his country's troops from Iraq and to sign the Kyoto Protocol, and his Labour Party defeated John Howard in November 2008. For 10 points, name this prime minister of Australia.
ANSWER: Kevin Rudd
4. The proteoglycan decorin often binds to fibrils of one type of this protein, and that type is coded for by sequences on chromosome 7 and chromosome 17. The partial hydrolysis of this protein generates gelatin, and reticular fibers are made from type III of this protein, which contains repeats of the sequence glycine-proline-hydroxyproline. This protein is assembled from three alpha chains in a triple helix structure. For 10 points, name this protein found in cartilage, ligaments, and tendons, the most abundant in the human body.
ANSWER: collagen
5. This man undertook an expedition to Mount Elgon in which he observed the primitive nature of the Kenyan Bugishu. He compared Hitler to "the Sybil" in his essay "Wotan," and wrote "Seven Sermons to the Dead" in addition to formulating ideas about synchronicity and introversion. Among his five namesake archetypes are the animus and the anima, and he was the best known pupil of the author of "The Interpretation of Dreams." For 10 points, name this Swiss psychologist who described the collective unconscious.
ANSWER: Carl Gustav Jung
6. One character in this novel describes man's "one truly effective weapon against the juggernaut of modern matriarchy," and another describes orderlies eating eggs and toast meant for him. One man is punished for asking about his medications, and a fishing trip is organized by a character who smuggles in a prostitute to help Billy lose his virginity. Chief Bromden kills that man, McMurphy, after Nurse Ratched has him lobotomized. For 10 points, name this work set in a mental institution, a novel by Ken Kesey.
ANSWER: One Flew Over the Cuckoo's Nest
7. This group lost to the forces of Casimir IV at the Battle of Puck, giving it poor standing in the Treaty of Torun. They had earlier lost between Lakes Pskov and Chud at Lake Peius. They lost the battle of Grunfeldeas to Poland, with whom they also fought the Thirteen Years' War, and they were centered at Marienberg. Their name derives from Saint Mary's care of wounded in Jerusalem. For 10 points, name this religious order of knights that contained the Livonian order and that lost at the Massacre on Ice and the first Battle of Tannenberg.
ANSWER: Teutonic Order of Knights [or House of the Hospitalers of Saint Mary of the Teutons in Jerusalem]
8. This deity received black animals sacrificed in sunken pits as his Meilichios, Chthonios, and Plousios versions. He once rewarded Periphas by turning him into an eagle after his death. In one story, this deity turned himself into a rock to hide himself from Aerope's father, and this deity was suckled by both Melissa and the goat Amalthea during his stay at Mount Ida. Punisher of Prometheus and lover of Ganymede, Mnemosyne, and Leda, for 10 points, name this adulterous king of the Greek gods. ANSWER: Zeus [do not accept or prompt on Jupiter]
9. $n$ has this property if and only if the Euler phi function evaluated on $n$ equals $n$-minus-one. Bertrand's postulate and Goldbach's conjecture concern the existence of these objects, whose Mersenne examples are always one less than a power of two. They can be detected via the Sieve of Eratosthenes, and every integer can be written as a product of them via the Fundamental Theorem of Arithmetic. For 10 points, name these integers that are only divisible by themselves and one.
ANSWER: prime numbers
10. One figure holds a miniature church in this man's St. Jerome and St. John the Baptist, and his Madonna and Child with Saint Anne was one of several works executed along with Masolino. An angel in red holds a sword above a weeping Adam and Eve in his Expulsion from Paradise, and he showed God standing behind and above a crucified Christ in The Holy Trinity. He painted several frescoes in the Brancacci Chapel, including one in which St. Peter is shown handing a coin to a tax collector. For 10 points, name this artist of The Tribute Money.
ANSWER: Masaccio [or Tommaso Cassai]
11. This man wrote a play about the Spanish inquisition called Torquemada, and his final novel concerned the bloody suppression of the Vendée. In addition to Ninety Three, he wrote a play which caused a namesake battle between romanticists and classicists, Hernani, and a novel in which Fantine leaves her daughter Cosette with some innkeepers. For 10 points, name this French author who wrote about Jean Valjean's escape from Inspector Javert in Les Miserables and about Quasimodo in The Hunchback of Notre Dame.
ANSWER: Victor-Marie Hugo
12. Prior to this battle, the Pratzen Plateau was abandoned in order to set a trap. It resulted in an armistice at Nikolsburg, and the treaty that followed this battle allowed for the seizure of the Teutonic Knights' estates. Resulting in the Treaty of Pressburg, Francis I agreed to end hostilities following it, and Kutuzov's control over his troops was virtually seized by Alexander I in this battle. For 10 points, name this engagement, sometimes called the Battle of the Three Emperors, an 1805 victory of Napoleon over the forces of Austria and Russia.
ANSWER: Battle of Austerlitz [or Battle of the Three Emperors]
13. One thinker from this country wrote a refutation of the book Patriarcha by Robert Filmer, mocking Filmer's claim that kings have unlimited power because they are descended from Adam, and a member of the Vienna Circle from this country wrote Language, Truth, and Logic. Besides the formulator of the tabula rasa, another thinker from this country argued that life was "nasty, brutish, and short," requiring a strong centralized state he called the Leviathan. For 10 points, name this home country of A. J. Ayer, John Locke, and Thomas Hobbes.
ANSWER: England [or Britain; or United Kingdom]
14. This scientist formulated a law relating an increase in atmospheric carbon dioxide to an increase in temperature, and the Eyring equation is a more general form of this man's equation relating temperature and activation energy to a rate constant. He also names a classification based on whether a substance increases the concentration of hydronium ions or hydroxide ions in a solution. For 10 points, name this Swedish chemist with an eponymous acid-base definition.
ANSWER: Svante August Arrhenius
15. This man used exaggerated contrapposto in one sculpture attributed to him called Satyr Pouring Wine, and another features the title deity preparing to capture a lizard on a tree trunk. One title character leans against a tree and may have once dangled a bunch of grapes in front of the other in another of his works. Along with Hermes and the Infant Dionysus, he used the courtesan Phryne as a model to show the title goddess dropping her drapery as she covers herself with one hand. For 10 points, name this Attic sculptor most famous for his Aphrodite of Knidos.
ANSWER: Praxiteles
16. In one of this author's short stories, the title "black man who made the angels wait" wakes up in a stable three days after being kicked by a horse. A priest named Cayetano falls in love with a girl institutionalized after a supposedly rabid dog bites her in his Of Love and Other Demons. He wrote about a man who waits fifty years for Juvenal Urbino to die so he can have Fermina Daza in Love in the Time of Cholera, and another of his works traces the history of a Macondo family, the Buendias. For 10 points, name this Colombian author of One Hundred Years of Solitude.
ANSWER: Gabriel Garcia Marquez
17. A member of this party coauthored the "truth-insecurities" act and served as speaker of the house for seventeen years. In addition to Sam Rayburn, a member of a splinter of this party was Fielding Wright, who was a 1948 vice presidential candidate. The "Peace" ones were labeled "Copperheads" during the Civil War, and men associated with this party have produced the Fair Deal and the Fourteen Points. For 10 points, name this party of Harry Truman and Woodrow Wilson, which generally opposes the G.O.P.
ANSWER: Democrats [or Democratic Party]
18. One suburb of this city is home to John Ehret High School, and many residents of another suburb of this city are currently suing Aaron Broussard. In addition to the suburbs of Marrero and Metairie, this city is located near the Chalmette Battlefield. One body of water bordering this city is connected to Lake Maurepas and Lake Borgne. This city's location between Lake Pontchatrain and the Mississippi River has led it to be nicknamed the "Crescent City." For 10 points, name this city in Louisiana that is home to the French Quarter and Bourbon Street.
ANSWER: New Orleans
19. Frank Wanlass of Fairchild Semiconductors developed a still-common low-power type of these devices. That complementary variety combines two earlier types named for channels, in which the quantum Hall effect was first observed. Those "metal-oxide semiconductor" types contrast with the bipolar junction type. Current terminology for the sections of this component includes source, drain, and gate, replacing the still-used terms of collector, emitter, and base. For 10 points, name this component ubiquitous in integrated circuits, the basis for logic gates.
ANSWER: transistors [accept Metal-Oxide Semiconductor Field Effect transistors or MOSFETs before "bipolar junction" is read]
20. Though not in the British Isles, one composer from this country wrote a Gaelic Symphony. Another wrote the piano pieces "Le bananier" and "La bomboula." In addition to Amy Cheney Beach and Louis Gottschalk, this country was home to the composer of Woodland Sketches, Edward MacDowell. Another composer from this country created the opera Treemonisha, and wrote piano pieces including "The Entertainer" and "Maple Leaf Rag." For 10 points, name this country, the birthplace of Scott Joplin and the "March King," John Philip Sousa.
ANSWER: United States
21. He wrote about the spiritual dean Jocelin's fanatical drive to build the title edifice in The Spire, and he wrote a novel in which the Neanderthal Lok watches his people die out in favor of the newfangled Homo sapiens. He wrote about a British naval lieutenant who clings to a rock for four days before dying. This author of The Inheritors and Pincher Martin is best known for a novel in which the twins Sam and Eric eventually ally with Jack against Ralph and Piggy while stranded on an island. For 10 points, name this British author of Lord of the Flies.
ANSWER: Sir William Gerald Golding
22. He once distributed flyers comparing Helen Gahagan Douglas's voting record to Vito Marcantonio. A speech responding to accusations of improperly using a "slush fund," claimed that his wife wore a "respectable Republican cloth coat" and admitted taking a dog as a gift. After giving the "Checkers" speech, he discussed objects found in Soviet flats in the "Kitchen Debate." During his presidency, he began "Vietnamization" and defeated George McGovern. For 10 points, name this president who resigned during the Watergate scandal.
ANSWER: Richard "Dick" Nixon
23. The free air and Bouguer methods are ways to measure anomalies in this phenomenon, first discovered due to Meinesz's accurate measurements of it at sea. The Airy and Pratt models concern an equilibrium of this force known as isostasy, and erosion caused by this phenomenon is labeled slumping, mass wasting, or creep. Granular materials that form a slope steeper than the angle of repose will likely erode due to this phenomenon. For 10 points, name this phenomenon that determines the course of rivers, an inverse-square attractive force between masses.
ANSWER: gravity

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1. He replaced the retiring Edgar Martinez in the lineup a year after returning from Kansas City. For 10 points each:
[10] Name this left fielder brought in by the World Champion Philadelphia Phillies to replace Pat Burrell, making their lineup even older and even more left-handed.
ANSWER: Raul Ibanez
[10] This team replaced injured closer Billy Wagner with Francisco Rodriguez right before trading for J.J. Putz, hopefully preventing another annual meltdown.
ANSWER: New York Mets
[10] This former Florida Marlin signed a fifty-five-million-dollar contract in 2005 with the Blue Jays before opting out and bolting for the Yankees.
ANSWER: Allan James Burnett
2. Located near Pyinmana, this city is noted for its lack of amenities, but it has an unrestricted supply of electricity, which is rare in its country. For 10 points each:
[10] Name this city, whose name means "Abode of Kings," which was named the capital of Burma by the ruling junta in 2006.

## ANSWER: Naypyidaw [or Nay Pyi Taw; or Nay Pyi Daw]

[10] Burma's capital had formerly been this city, which is the home of the Shwe Dogon Pagoda. ANSWER: Rangoon [or Yangon]
[10] Formed by the confluence of the Nmai and Mali rivers, this major river of Burma flows into the Andaman Sea. Its ports include Mandalay, and Rangoon is located on its eastern mouth.
ANSWER: Irrawaddy
3. Answer some questions about a certain concept, viewed anthropologically, for 10 points each.
[10] The Golden Bough is subtitled, "A Study in Magic and" (this concept). A Malinowski work compares it with Magic and Science.

## ANSWER: religion

[10] A Sigmund Freud work examines this kind of religion, in which a sacred animal represents the spirit of dead ancestors, and explains how it results in a set of prohibitions, or "taboos."
ANSWER: totemism
[10] This social anthropologist and author of Witchcraft, Oracles, and Magic Among the Azande also wrote Theories of Primitive Religion.
ANSWER: Edward Evan Evans-Pritchard
4. He painted a banana for the album The Velvet Underground and Nico. For 10 points each:
[10] Name this pop artist who also painted repetitive and colorful images of Marilyn Monroe as well as some soup cans.
ANSWER: Andy Warhol [or Andrew Warhola]
[10] Warhol began painting soup cans in an effort to move away from this comic book inspired pop artist of Drowning Girl and Whaam!.
ANSWER: Roy Fox Lichtenstein
[10] This artist included the title number three times in his painting I Saw the Figure Five in Gold.
ANSWER: Charles Demuth
5. His essays include The American Scholar and Nature. For 10 points each:
[10] Name this early transcendentalist and friend of Thoreau.
ANSWER: Ralph Waldo Emerson
[10] Emerson claimed that "A foolish consistency is the hobgoblin of little minds" in this essay which advocates avoiding conformity.
ANSWER: Self-Reliance
[10] Emerson wrote this essay after reading the Bhagavad Gita and some essays on the Vedas. This essay looks at the title spirit as unifying the world.
ANSWER: The Over-soul
6. For 10 points each, name these eponymous effects from physics.
[10] Named after a Frenchman, this term refers to a fictitious force on an object in a rotating frame of reference. It causes huge gyres to form in the middle of the ocean.
ANSWER: Coriolis effect
[10] In this effect, excess heat is given off when a current is passed through a junction. It is the inverse of one named for Seebeck.
ANSWER: Peltier effect
[10] A Dutch scientist names this effect that describes the alteration of wave frequency when the source of the wave is moving relative to the observer.
ANSWER: Doppler effect
7. He expelled the Knights Hospitalers from Rhodes in 1522 and his viziers included Ibrahim, Rustem, and Sokolli. For 10 points each:
[10] Name this Ottoman sultan whose corsair Barbarossa enjoyed naval victories over Andrea Doria. ANSWER: Suleiman I [or Suleiman the Magnificent; or Suleiman the Lawgiver]
[10] Suleiman the Magnificent was the son and successor of this man, whose defeat of the Mamelukes added Syria and Egypt to the Ottoman Empire.
ANSWER: Selim I [or Selim the Grim]
[10] Suleiman won this 1526 battle against Louis II in which over twenty-five thousand of Louis's troops were killed in battle and which resulted in the Ottoman domination of Hungary.
ANSWER: Mohacs
8. Name these trickster gods, for 10 points each.
[10] When he wasn't attempting to collect the entire world's knowledge in a calabash, this African spider god taught mankind useful skills like how to plant grain and use a shovel.

## ANSWER: Anansi

[10] In one myth, this figure from Native American myth thrust his penis into a log, only to have much of it gnawed off by a chipmunk. He created the first people by kicking a ball of mud.

## ANSWER: Coyote

[10] This Polynesian god and namesake of an island tricked his brothers into pulling up the Hawaiian Islands, which were caught on the end of his magic fishhook.
ANSWER: Maui
9. He wrote about the title trees "near a catacomb" and "of the Appian Way" in Pines of Rome. For 10 points each:
[10] Name this composer, who also paid homage to the capital of Italy in his Fountains of Rome and Roman Festivals.
ANSWER: Ottorino Respighi
[10] This French composer wrote a Roman Carnival Overture, along with a tone poem that includes a "March to the Scaffold," Symphonie Fantastique.

## ANSWER: Hector Berlioz

[10] Berlioz wrote one of this type of composition to commemorate those who died in the July Revolution. Mozart and Verdi also composed notable settings of this mass for the dead.
ANSWER: requiem
10. Answer the following about the novel Frankenstein, for 10 points each.
[10] Frankenstein was written by this woman, whose mother wrote A Vindication of the Rights of Woman.
ANSWER: Mary Wollstonecraft Shelley [prompt on Shelley]
[10] Frankenstein centers on this member of the Frankenstein family, who studies the pseudoscientific theories of Paracelsus and Albertus Magnus before discovering the means of creating life.
ANSWER: Victor Frankenstein
[10] After killing Victor's brother William, the creature frames this servant for the act by planting a locket on her. She is convicted and executed despite Victor's defense.
ANSWER: Justine
11. A pair of two-dimensional vectors have a dot product of zero only if they have this property. For 10 points each:
[10] Name this property, often contrasted with being parallel, that is most commonly used to describe two lines that meet at a right angle.
ANSWER: perpendicular [or orthogonal]
[10] In two dimensions, if a line $y$ has a slope of $m$, any line perpendicular to $y$ must have this value for its slope.
ANSWER: - $\mathbf{1 / m}$ [or minus 1 over $\mathbf{m}$, or negative 1 over $\mathbf{m}$; or other equivalents]
[10] Intersecting a third line with two perpendicular lines produces a right triangle. The two interior angles made by third line are known by this term, meaning that they sum to 90 degrees.
ANSWER: complementary angles
12. Forests have played an important role in European history. For 10 points each:
[10] Covering areas of Luxembourg, France, and Belgium, this forest area was the scene of fierce fighting in World Wars I and II, including the Battle of the Bulge.

## ANSWER: Ardennes

[10] In addition to a conflict between Charlemagne and Widukind, this forest was the scene of a namesake battle of 9 CE, in which Hermann defeated the Roman legions of Varus.
ANSWER: Teutoburg Forest
[10] Also known as the Everlasting League, the League of the Three Forest Cantons was an alliance against the Habsburgs that helped lead to the formation of this present day nation.

## ANSWER: Switzerland

13. One figure in this religion, Verethraghna, represents victory, and a yasht from the avestas is dedicated to him. For 10 points each:
[10] Name this dualistic religion that also includes Mithra and Gayomart in its pantheon, and which includes the evil god Angra Mainyu.
ANSWER: Zoroastrianism
[10] Zoroastrianism was created in this modern day country. It became the state religion of the Sassanid dynasty here when it was called Persia.
ANSWER: Iran
[10] Zoroastrianism's highest god is this creator of Angra Mainyu and Spenta Mainyu. He contrasts with Angra Mainyu, and in some heresies he was created by Zurvan.
ANSWER: Ahura Mazda [or Ormazd]
14. One character in this work sings the "Jewel Song" when she disdains a gift of flowers in favor of jewelry. For 10 points each:
[10] Name this opera, which ends with a chorus of angels singing that Marguerite has been saved as she ascends the scaffold.
ANSWER: Faust
[10] This composer of Faust wrote an operatic adaptation of The Doctor In Spite of Himself, as well as a Funeral March of a Marionette.

## ANSWER: Charles Gounod

[10] In this Gounod opera, one title character sings Je veux vivre to her nurse Gertrude to express her disinterest in marriage but falls in love with the other after he sneaks into a Capulet party.
ANSWER: Roméo et Juliette [or Romeo and Juliet]
15. In this play, Stephen is disinherited in favor of Adolphus Cusins. For 10 points each:
[10] Name this play featuring the conflict between the titular Salvation Army officer and her father, Andrew Undershaft, who runs a munitions factory.
ANSWER: Major Barbara
[10] Major Barbara was written by this Irish playwright of Arms and the Man, Man and Superman, and Caesar and Cleopatra.
ANSWER: George Bernard Shaw
[10] In this Shaw play, Henry Higgins attempts to transform the Cockney flower girl Eliza Doolittle into a lady.
ANSWER: Pygmalion
16. For 10 points each, name the following about solution.
[10] This term denotes that two substances are mutually soluble regardless of proportions. Gases are presumed always to be this and two liquids often lose this property at low temperatures.
ANSWER: miscible [accept word forms]
[10] This most common measurement of concentration is a ratio of moles of solute to liters of solution. ANSWER: molarity
[10] This measure, represented as $X$ sub $S$, is a ratio of the number of particles of substance $S$ over the number in the solution and may be used in vapor pressure lowering equations.
ANSWER: mole fraction
17. Name these leaders or countries that formed alliances with Hitler, for 10 points each.
[10] This Fascist leader of the Nationalist forces during the Spanish Civil War accepted aid from Nazi Germany to fight the Republicans, though he kept his country neutral in World War II.
ANSWER: Francisco Franco
[10] This country was led during World War II by lan Antonescu, who allied this nation with Nazi Germany, oversaw pogroms, and declared a "holy war" on the Soviet Union.
ANSWER: Romania
[10] This nation also allied with Germany during World War II. Todor Zhivkov led this nation from the 1960s until 1989 and attempted to forcibly assimilate ethnic Turks into this nation.
ANSWER: Bulgaria
18. Many of his plays are based on the works of earlier Greek playwrights. For 10 points each:
[10] Name this author of The Thebiad and Alexander the Great, as well as a play about the son of Murad IV, Bajazet.

## ANSWER: Jean Racine

[10] Racine was from this European nation, whose other authors include Dumas.
ANSWER: France
[10] This Racine drama, based on the Euripedes play Hippolytus, is titled for the queen who falls in love with that character. Hippolytus rejects her, leading to her suicide.
ANSWER: Phèdre [or Phaedra]
19. It is sometimes referred to as the Noble Experiment. For 10 points each:
[10] Name this period of American history, during which the manufacture, transportation, and sale of alcohol was forbidden by law.
ANSWER: Prohibition
[10] Prohibition began in 1920 with the passage of the Eighteenth Amendment, which was enforced by this 1919 act named for a Minnesota Representative.
ANSWER: Volstead Act [prompt on National Prohibition Act]
[10] This Presbyterian clergyman published six sermons on intemperance. His children included a son named Henry Ward, and a daughter who wrote Uncle Tom's Cabin.
ANSWER: Lyman Beecher
20. It is also known as Hansen's disease. For 10 points each:
[10] Name this bacterial disease that causes massive deformation of the skin.

## ANSWER: leprosy

[10] The BCG vaccine offers protection against leprosy, and also combats this disease that is rampant in the Russian prison system, causes lesions on the lungs, and can be detected in the Mantoux test.
ANSWER: tuberculosis [or TB; or consumption]
[10] Tuberculosis is sometimes known as this man's namesake disease. He put forth four postulates designed to determine if a certain microbe causes a certain disease.
ANSWER: Heinrich Hermann Robert Koch ["coke"]
21. Its casualties included Peter Fechter, who bled to death in full view of the western media. For 10 points each:
[10] Name this structure that separated East and West Germany.
ANSWER: Berlin Wall
[10] This world leader was asked by Reagan to "Tear down this wall!" and decided not to interfere when the wall fell. In his own country he instituted glasnost and perestroika.
ANSWER: Mikhail Gorbachev
[10] The wall was constructed under the supervision of this East German politician who would later lead the country from 1971-1989.
ANSWER: Erich Honecker
22. Authors from this country include Ken Saro-Wiwa and Ben Okri. For 10 points each:
[10] Name this African country, home to Chinua Achebe.
ANSWER: Nigeria
[10] This Nigerian playwright wrote The Lion and the Jewel and The Strong Breed.
ANSWER: Akinwande Oluwole "Wole" Soyinka
[10] In this Soyinka play Elesin Oba's ritual suicide is interrupted by the British.
ANSWER: Death and the King's Horseman
23. A small sample of DNA is denatured in this process and complementary primers are allowed to anneal to it. For 10 points each:
[10] Name this DNA amplification technique invented in 1984 by Kary Mullis.
ANSWER: Polymerase Chain Reaction
[10] "Taq" is one heat-resistant type of these enzymes used in PCR to extend the template DNA strand.
They add nucleotides to the 3' end of a new strand.
ANSWER: DNA polymerase
[10] This technique can be used to analyze and separate DNA samples. A current causes nucleic acids or proteins to migrate by mass; the results may be visualized with ethidium bromide.
ANSWER: gel electrophoresis

