



IESA Format League Set
Sample Round

Tossups

First Half

Tossup One
American History

This man's presidency saw Brigade 2056 disastrously storm a beach, as well as Sargeant Shriver's creation of a civilian foreign service program. In addition to the Bay of Pigs and the creation of the Peace Corps, this man laid the seeds for the Vietnam War by sending US advisors there. For ten points, name this president who was succeeded by Lyndon Johnson after being assassinated in 1963.

ANSWER: John F. **Kennedy**

Tossup Two
American Literature

This author invented the detective story in his work *The Murders in the Rue Morgue*, while another of his stories deals with the murder of an old man with a "vulture eye." This author wrote a poem about how the title creature "came a tapping, As of someone gently rapping, rapping at my chamber door." For ten points, name this Baltimore author of "The Telltale Heart" and "The Raven"

ANSWER: Edgar Allan **Poe**

Tossup Three
European History

This man's troops defeated Russia at the battles of Friedland and Borodino. After returning from Elba, this Corsica-born military leader was exiled to St. Helena after losing to the combined forces of Blucher and the Duke of Wellington at Waterloo. For 10 points, name this early 19th century French military leader who actually wasn't particularly short for his time.

ANSWER: **Napoleon Bonaparte** [accept either; or either of **Napoleone Buonaparte**; also accept **Napoleon I**; do not accept "Napoleon II" or "Napoleon III"]

Tossup Four
British Literature

This man wrote “so long live this and it gives life to thee” in his sonnet 18, while Ariel is freed by Prospero in his *The Tempest*. This man also described Gloucester’s blinding in a play about the father of Cordelia and another work in which a sword-thrust through a curtain kills Polonius. For ten point name this author of *King Lear* and a work in which the title Dane says “To be or not to be,” *Hamlet*.
ANSWER: William **Shakespeare**

Tossup Five
Civics

Exceptions to this right include the Miller test and the outcome of *Schenck v. U.S.*, which established the “clear and present danger” rule. The case *Tinker v. Des Moines* dealt with the symbolic variety of this freedom in a school setting. For 10 points, name this freedom guaranteed by the first amendment that allows individuals to express their ideas without censorship.
ANSWER: freedom of **speech** [prompt on **first amendment** before mentioned]

Tossup Six
Health

Structures in this organ include the glomerulus, Bowman’s capsule, and the Loop of Henle. Calcium oxalate crystals can form objects in this organ made up of nephrons; those objects are this organ's painful namesake stones. For ten points, name this organ which filters wastes from blood to create urine.
ANSWER: **kidney**

Tossup Seven
Math (Theoretical)

Ceva’s Theorem provides a test for whether cevians in this shape are concurrent. An Euler line is formed by the centroid, orthocenter, and circumcenter of this shape. The law of sines equates the ratios of this shape’s side lengths to the sines of the opposite angles. Its area can be calculated using Heron’s formula and its solid of revolution is a cone. For ten points, name this three sided polygon.
ANSWER: **triangle**

Tossup Eight
Life Sciences

Eutrophication can result in the namesake blooms of these organisms. Lichens are a symbiosis of a fungus and a cyanobacterium or one of these organisms, while seaweed is a multicellular form of this type of protist. For ten points, name these photosynthetic organisms that come in red, brown, but most commonly green varieties, which usually live in water.
ANSWER: **algae**

Tossup Nine

Math (Computational—30 Seconds)

Pencil and paper ready. Find the area under the line $x + 3$ ("X plus 3") from $X = 0$ to $X = 2$. You can do this by taking the integral or by realizing that this area forms a trapezoid with height 2 and base lengths 3 and 5. Find the Answer to $\frac{1}{2}$ of 2 times the quantity of $3 + 5$.

ANSWER: **8** [or "**Eight**"]

Tossup Ten

Physics

This is the only one of the four fundamental forces without a known force carrier particle. Einstein described it as a curvature in spacetime, while this interaction's universal law describes its force as proportional to the masses of two objects and inversely proportional to the square of the distance between them. For ten points, name this fundamental interaction explained by Isaac Newton which attracts masses to one other.

ANSWER: **gravity** [or **gravitation**]

Tossup Eleven

World Literature

One author from this country wrote about Julian Sorel in *The Red and The Black*. In addition to Stendhal, another author from this country wrote about the title lover of Leon Dupuis and wife of Charles in *Madame Bovary*. In a novel set in this country, Javert does not turn in Jean Valjean. For ten points, name this country where *Les Miserables* is set, the home of Gustave Flaubert and Victor Hugo, who lived in its capital Paris.

ANSWER: **France**

Tossup Twelve

Home Economics

One example of this type of dish which is popular in Vietnam is pho ["fo"]. A cold example of this dish is gazpacho, while Chinese restaurants often offer an egg drop variety. A location which offers free food to the poor is often called a kitchen for this type of food. For 10 points, name this dish made from combining ingredients in a liquid, a famous example of which is chicken noodle.

ANSWER: **Soups** [prompt on reasonable equivalents, such as "broth," "stew," etc.]

Tossup Thirteen

Other Literature

The philologist Elwin Ransom is the protagonist of this author's *Space Trilogy*, and he also wrote a work of Christian apologetics entitled *The Screwtape Letters*. However he may be best known for a series in which the Pevensie siblings visit the title location and meet Aslan. For 10 points, name this author of *The Chronicles of Narnia*, which includes *The Lion, the Witch, and the Wardrobe*.

ANSWER: Clive Staples **Lewis**

Tossup Fourteen
Vocational Education

The “Big Four” firms which are involved in this profession include Deloitte and Ernst and Young. The test to become a member of this profession includes sections on business law, auditing, and taxation, and after taking it, members of this profession receive the title of CPA. For 10 points, name this job which involves keeping track of an individual or company's financial information.

ANSWER: **Accountancy** [accept word forms; accept **Auditing** until mentioned]

Tossup Fifteen
Visual Art

This artist painted a curved brown path in his *Wheatfield With Crows*, and he included two chairs in a painting of a blue-walled room. This painter of the *Bedroom in Arles* also put a blue spire in the middle ground of a work with undulating cypresses and blue hills. For ten points, name this painter noted for his sunflowers and the *Starry Night*, who is most famous for cutting off his ear.

ANSWER: Vincent **Van Gogh**

-----Second Half-----

Tossup Sixteen
General Math (Computational—30 Seconds)

Pencil and paper ready. Find the probability of rolling at least one four on two standard six sided dice. It helps if you find the chance of not rolling any fours and subtract that from one, and to know that there is a 25/36 chance that no fours will appear. Find the answer to one minus 25/36.

ANSWER: **11/36** [accept **0.305** or **30.5 percent**]

Tossup Seventeen
Chemistry

One way of measuring this quantity is through the Rankine scale. The Ideal Gas Law usually represents this property as multiplied by the ideal gas constant and the amount, while Charles' Law varies this quantity inversely with volume. For ten points, name this quantity, a measure of the average kinetic energy of the particles in a body, measured in both Kelvin and Fahrenheit degrees.

ANSWER: **temperature** [accept “absolute **temperature**”; do not accept “heat”]

Tossup Eighteen
Music

This composer's Hammerklavier is known for its difficulty, while his piano sonatas include the Appassionata and Pathétique. His sixth symphony is known as the "Pastoral," while his third is the "Eroica." For ten points, name this German composer of the Moonlight Sonata, whose ninth symphony contains lyrics from the Ode to Joy.

ANSWER: Ludwig van **Beethoven**

Tossup Nineteen
Geography

This state is home to Lake Mono and Lake Tahoe. The tallest mountain in the lower 48 states appears in this state home to Yosemite Valley and Sequoia National Park, while the San Andreas fault runs under this state. For ten points, name this US state home to both the Mojave Desert and Death Valley, with capital at Sacramento.

ANSWER: **California**

Tossup Twenty
Other Academic Knowledge

The first major dissenter from this man's views was Alfred Adler. This man created the idea of the Electra and Oedipus complexes. One of this man's most famous works asserts that the title entities are all means of wish-fulfillment; that work is *The Interpretation of Dreams*. For ten points, name this Austrian psychologist who founded psychoanalysis.

ANSWER: Sigmund **Freud**

Tossup Twenty One
Other Science

Raymond Davis won a Nobel prize for detecting neutrinos in this celestial body, one region of which is the chromosphere. The frequency of patches found on this body tends to follow an eleven-year cycle; these are its namesake spots. Proxima Centauri is the closest other star to this one. For 10 points, name this star located about 93 million miles from the Earth.

ANSWER: the **Sun**

Tossup Twenty Two
Religion

One branch of this religion is divided into Ismaili and Twelvers, and mystics in this religion are known as sufis. One duty in this religion is the donation of zakat, while another is the Shadha. The most famous duty of this religion involves circling the Kaaba seven times; that duty is the hajj. For ten points, name this religion which regards Muhammad as god's final prophet.

ANSWER: **Islam**

Tossup Twenty Three
Math (Theoretical)

The fact that this property holds for real numbers explains why the product of two negative numbers is a positive number. One use of this property is the multiplication of a monomial of a binomial, and one statement of this property is that $a(b + c) = ab + ac$ [A times the quantity B plus C equals AB plus AC]. For 10 points, name this property of real numbers illustrated by the fact that $2(x + 3) = 2x + 6$.

ANSWER: **distributive** property [or **distribution**]

Tossup Twenty Four
Mythology

This woman was the sister of Stheno and Euryale, who were afflicted by the same curse. That curse came after this woman had an affair with Poseidon in Athena's temple. This woman's death came after the son of Zeus and Danaë appeared with a reflective shield. For ten points, name this Gorgon with snakes for hair who turned men who saw her into stone until Perseus killed her.

ANSWER: **Medusa**

Tossup Twenty Five
American History

William Berkeley's unpopular rule in this colony led to Bacon's Rebellion. This present-day state was the site of Nat Turner's slave revolt, and its northwestern counties seceded from it during the Civil War. Home of the House of Burgesses, Williamsburg succeeded Jamestown as its capital. For 10 points, name this state whose current capital is Richmond.

ANSWER: **Virginia**

Tossup Twenty Six
Math (Theoretical)

Pencil and paper ready. Find the determinant for a matrix, the top row of which reads [3 5] ("Three Five") and the bottom row of which reads [1 7] ("One Seven"). That value is also equal to the value for x if $2x - 8 = 5x - 56$ ("Two X minus eight is equal to Five X minus Fifty-Six"). For 10 points, give the value for x if $3x$ is equal to 48.

ANSWER: **16**

Tossup Twenty Seven
Chemistry

This is the only elemental solid that exhibits antiferromagnetism at room temperature. In the +6 oxidation state, it can form ions with four or seven oxygen atoms, depending on the pH. Atoms of this element are used to prevent rust in steel. For ten points, name this element with atomic number twenty-four and chemical symbol Cr.

ANSWER: **chromium** [accept **Cr** before mentioned]

Tossup Twenty Eight
Popular Culture

One song by this group has a speaker who ends up sleeping in a bathtub. In addition to *Norwegian Wood*, this group wrote a song proclaiming “You can talk to me,” *Hey Bulldog*. Their first big hit was *Love Me Do*, and other albums by this band include *Rubber Soul*, *Revolver*, and *Yellow Submarine*. For ten points, name this British group behind *Sgt. Pepper’s Lonely Hearts Club Band*.

ANSWER: The **Beatles**

Tossup Twenty Nine
General Math (Theoretical)

Inverses of functions that contain these mathematical objects are called logarithmic functions. The denominators of fractional ones of these can be written as roots, and negative ones indicate the multiplicative inverse of an expression. When applied to variables, they are equivalent to the degree of that variable in that expression. For 10 points, name these mathematical objects, such as the 3 in the expression 2^3 [“Two to the third”].

ANSWER: **exponents**

Tossup Thirty
World History

This leader began the swadeshi program of protesting foreign goods, which included an emphasis on homespun cloth. This leader who was succeeded by Nehru led the salt march against a tax on that substance, and was assassinated because he insisted on paying 550 million rupees to Pakistan. For ten points, name this supporter of satyagraha, or nonviolent resistance, who led the liberation of India.

ANSWER: Mohandas Ketchurian **Gandhi** [or Mahatma **Gandhi** or **Bapu**]

-----Replacement Tossups-----

Tiebreaker One
European History

The feat usually attributed to this man was actually completed by Juan Sebastian Elcano aboard the *Victoria*. This man's travels were related by Antonio Pigafetta, and he quelled an Easter mutiny against him in Argentina before being killed a year later in a skirmish in the Philippines. For 10 points, name this Portuguese navigator whose crew completed the first circumnavigation of the Earth.

ANSWER: Ferdinand **Magellan**

Tiebreaker Two
American Literature

One short story by this author sees its title character's wife Faith take part in witchcraft in the woods. In addition to *Young Goodman Brown*, this author wrote a book in which the Pynchons own the title residence. In another book by this author, Roger Chillingworth is the former husband of Hester Prynne. For ten points, name this man who wrote *The House of the Seven Gables* and *The Scarlet Letter*.

ANSWER: Nathaniel **Hawthorne**

Tiebreaker Three
Life Sciences

This process consists of the light and dark reactions. This process occurs in the thylakoids and stroma of chloroplasts, which make up the Chlorophyll which capture the light energy that drives this process. For ten points, name this process used by plants to convert carbon dioxide into sugars and oxygen.

ANSWER: **photosynthesis**

Bonuses

Bonus One

Physics (3 Parts)

Name some things about fluids and the principles that govern them.

- 1) This principle states that a floating object displaces its own weight of fluid. It was discovered by a Greek scientist who exclaimed “eureka” upon doing so.
- 2) This is the measure of a fluid’s resistance to change and can be thought of as its thickness. Hence, water has a relatively low value for this while corn syrup has a much higher value.
- 3) This principle named for a Swiss mathematician, states that as the speed of a fluid increases, its pressure or potential energy decreases.

ANSWERS:

- 1) **Archimedes**’ Principle
- 2) **viscosity**
- 3) **Bernoulli**’s Principle

Bonus Two

American History (4 Parts)

Its first day was Black Tuesday.

- 1) Name this economic downturn which began with the stock market crash of 1929 which some say was worsened by the actions of President Herbert Hoover.
- 2) Hoover was succeeded by Franklin Roosevelt, who enacted this plan to try to stop the aforementioned downturn, which included the creation of the Tennessee Valley Authority.
- 3) Opposition to that plan by members of this government body resulted in Roosevelt trying to “pack” it full of members supporting his efforts.
- 4) The downturn was ended by America's entry into this conflict.

ANSWERS:

- 1) **Great Depression**
- 2) **New Deal**
- 3) **Supreme Court** [prompt on “Judicial Branch” or “Courts”]
- 4) **World War II** [or **Second World War**]

Bonus Three

Agriculture (5 Parts)

Answer these questions about agriculture.

- 1) This crop heavily planted in the Midwest is the source of protein for most processed foods, but is better known for being the basis for a type of sauce used in Chinese dishes.
- 2) Though the oil of the aforementioned crop is high in undesired linolenic oil, this company which makes Roundup has created a form which is low in such oil.
- 3) The aforementioned company is the world's largest provider of the genetically modified type of these ungrown plants, examples of which are cherry pits and rice grains.
- 4) The aforementioned company is also a major provider of hormones to promote the growth of these animals, the meat of which can be found in veal.
- 5) Though that animal normally feeds on grass in the wild, on a farm, it usually feeds on this plant, a diet of which causes increased acidity in its stomach, thus requiring antibiotics to avoid ulcers.

ANSWERS:

- 1) **Soybeans** [or **Soya**]
- 2) **Monsanto**
- 3) **Seeds**
- 4) **Cattle** [or **Cows**]
- 5) **Corn** [or **Maize**]

Bonus Four

American Literature (4 Parts)

One scene in this novel sees Jem and Scout saved by Boo Radley from an attack by Bob Ewell as they return from a Halloween pageant.

- 1) Name this novel set in the fictional town of Maycomb, Alabama about the trial of a man who is wrongly accused of raping Mayella Ewell.
- 2) The aforementioned novel was the only novel written by this author awarded the Presidential Medal of Freedom in 2007.
- 3) That author based this friend of Jem and Scout on her friend, the famous author Truman Capote.
- 4) This central character of that novel is the father of Jem and Scout Finch. He advises climbing “into a man’s skin” and “walking around in it” to see things from his perspective.

ANSWERS:

- 1) ***To Kill a Mockingbird***
- 2) Harper **Lee**
- 3) **Dill** [also accept either one of **Charles** Baker **Harris**]
- 4) **Atticus** Finch [prompt on “Finch”]

Bonus Five
Algebra (4 Parts)

Pencil and paper ready. Methods of solving these equations include factoring, completing the square, and a namesake formula that includes the discriminant.

- 1) Name these polynomial equations of degree 2, an example of which is $x^2 + x - 12 = 0$.
- 2) Solve the equation $x^2 + x - 12 = 0$ for x . Give both values of x .
- 3) Solve the equation $x^2 + 2x - 8 = 0$ for x . Give both values of x .
- 4) Graphs of the aforementioned functions, such as $f(x) = x^2 + x - 12$, take this shape, which resembles the letter U.

ANSWERS:

- 1) **quadratic** equation
- 2) $x = -4$, $x = 3$
- 3) $x = -4$, $x = 2$
- 4) **parabola**

Bonus Six
Religion (3 Parts)

Name some Jewish holidays.

- 1) This holiday commemorates the rededication of the temple. It is most famous for involving menorahs and dreidels, not to mention latkes.
- 2) This day of repentance begins with the Kol Nidre prayer. It is the most famous fast in the Jewish calendar.
- 3) Yom Kippur concludes this ten-day period that begins with Rosh Hashanah.

ANSWERS:

- 1) **Hanukah** [or **Chanukah**; accept reasonable equivalents]
- 2) **Yom Kippur**
- 3) **High Holy Days** [or **Days of Awe** or **Yamim Noraim**]

Bonus Seven
European History (4 Parts)

It was preceded by a customs union called the Zollverein.

- 1) Name this nation unified in 1871 from territories such as Bavaria and Saxony. It was again divided following World War II, but reunited in 1990.
- 2) This man was the first chancellor of a unified Germany. During his term, he instituted the Kulturkampf campaign against the Roman Catholic Church.
- 3) During his tenure, Bismarck also implemented a number of laws opposing this political philosophy, which many have accused President Obama of promoting.
- 4) Bismarck was eventually dismissed by this German leader who led the nation into the First World War.

ANSWERS:

- 1) **Germany**
- 2) Otto von **Bismarck**
- 3) **Socialism** [do not accept “Communism”]
- 4) Kaiser **Wilhem II** [or Kaiser **William II**; prompt on “Kaiser Bill” or “The Kaiser”]

Bonus Eight
Health (3 Parts)

Name these molecules important to human health.

- 1) This class of molecules is made up of carbon as well as hydrogen and oxygen in a two-to-one ratio. Examples include glucose, sucrose, and other sugars and starches.
- 2) Proteins are made up of these building blocks that have an amine group and a carboxyl group. Examples of the twenty different types are glycine, tryptophan, and cysteine.
- 3) This steroid that maintains membrane fluidity is divided into HDLs, which are often referred to as the “good” type of these molecules, and LDLs, known as the “bad” type because they signal heart problems.

ANSWERS:

- 1) **carbohydrates**
- 2) **amino acids**
- 3) **cholesterol**

Bonus Nine
Languages (5 Parts)

Its nearest dialect is a Dutch language known as Frisian.

- 1) Name this language spoken in such locations as Portland, Brisbane, and Minneapolis, which has Old and Middle forms spoken in the Middle Ages.
- 2) Though the aforementioned language has the most speakers in the world, this language has the most native speakers in such places as Xi'an (shee-ahn) and Shanghai.
- 3) The two aforementioned languages have been combined to form this kind of simplified language used by two groups which don't share a common language as a second language. This type of language is often contrasted with Creole languages.
- 4) One example of the aforementioned type of language can be found on this island American state which also possesses a native language.
- 5) This language, the standard form of which is spoken in the Philippines, is the most common minority language in the aforementioned American state.

ANSWERS:

- 1) **English**
- 2) **Mandarin Chinese** [accept either]
- 3) **Pidgin**
- 4) **Hawaii** [or Moku'āina o **Hawai'i**]
- 5) **Tagalog**

Bonus Ten
Mythology (4 Parts)

This god was the son of Nephtys.

- 1) Name this jackal-headed god, the inventor of mummification:
- 2) This god was mummified by that jackel headed god after being murdered by his brother. He fathered the aforementioned god by Nephtys.
- 3) This god of chaos and the desert killed his brother, the aforementioned mummified figure.
- 4) All of these figures were worshiped in an ancient civilization that existed in this modern-day country, whose capital is Cairo.

ANSWERS:

- 1) **Anubis** [or **Inpu** or **Anupu** or **Inepw** or **Yinepew**; accept reasonable pronunciations]
- 2) **Osiris** [or **Asar**; or **Unnefer**; accept reasonable pronunciations]
- 3) **Seth** [or **Sheth**, **Sutekh**, **Setan** or **Seteh**; accept reasonable pronunciations]
- 4) Arab Republic of **Egypt**

Bonus Eleven
Physics (4 Parts)

Name some layers of the Earth.

- 1) This is the outermost layer of the Earth. The oceanic and continental varieties have different compositions, especially with regards to incompatible elements.
- 2) Convection currents cause circulation in this region below the crust. It is predominantly solid and accounts for most of the Earth's volume.
- 3) The center of the Earth is given this term. It is composed of mainly an iron-nickel alloy and it is a solid sphere, distinct from its liquid counterpart.
- 4) This is the aforementioned liquid counterpart, which is also part of the Earth's center.

ANSWERS:

- 1) **crust**
- 2) **mantle**
- 3) **inner** core
- 4) **outer** core

Bonus Twelve
Popular Culture (5 Parts)

Answer these questions about a science fiction movie series.

- 1) This famous figure visit Mos Eisley Spaceport with Obi-Wan Kenobi in order to look for a way to escape from Tatooine after his Uncle Owen and Aunt Beru are killed by stormtroopers.
- 2) The aforementioned figure is one of the protagonists of this movie series with six installations.
- 3) That figure meets this other protagonist, the smuggler captain of the *Millenium Falcon*, in the Mos Eisley Cantina.
- 4) While escaping from the Galactic Empire, the *Millenium Falcon* is pursued by this type of Imperial starfighter.
- 5) This moon is the final destination of the *Millenium Falcon*, as well as the location where the Death Star is destroyed.

ANSWERS:

- 1) **Luke** Skywalker [prompt on "Skywalker"]
- 2) **Star Wars**
- 3) **Han Solo** [accept either]
- 4) **Twin Ion Engine** starfighter [or **TIE** starfighter]
- 5) **Yavin IV (Yavin 4)**

Bonus Thirteen
General Math (4 Parts)

Pencil and paper ready. Josh's first four math test scores are 65, 55, 70, and 42.

- 1) What is the average of his four test scores?
- 2) What must he make on his fifth test in order to pass his class with a score of exactly 60%?
- 3) Assume that Josh made a 68 on his fifth test. Find his median test score.
- 4) This term refers to the value that occurs in a data set most frequently. The set of Josh's math test scores does not have one of these.

ANSWERS:

- 1) 45.5 [or 91/2; or 45 and a half]
- 2) 68
- 3) 65
- 4) mode

Bonus Fourteen
Computers (5 Parts)

Answer these questions about computer components.

- 1) These components are used to store information and are frequently attached to a computer using SATA or SCSI connectors. Most computers designate theirs with the letter "C."
- 2) Hard drives feature platters are made up of this material which also names a "Valley" in California with many technology companies.
- 3) Currently, hard drive sizes are usually measured in this unit equal to a billion bytes.
- 4) Some hard drives have begun to be measured in this unit equal to a thousand of the previous unit, or a trillion bytes.
- 5) The first manufacturer of hard drives was this company which began business in 1896 by producing calculators, and which previously produced the ThinkPad device before selling the rights to Lenovo.

ANSWERS:

- 1) **H**ard Disk **D**rive
- 2) **S**ilicon
- 3) **G**igabytes
- 4) **T**erabytes
- 5) **I**nternational **B**usiness **M**achines

Bonus Fifteen
Other Academic Knowledge (3 Parts)

Name some famous philosophers from a certain country.

- 1) This man believed in the concept of the “ubermensch” and wrote *Thus Spake Zarathustra*.
- 2) This man theorized the Master/Slave dialectic and famously wrote *Phenomenology of Spirit*.
- 3) Both Nietzsche and Hegel were from this European country, with capital at Berlin.

ANSWERS:

- 1) Friedrich **Nietzsche**
- 2) George **Hegel**
- 3) **Germany**

Bonus Sixteen
World History (3 Parts)

They battled the Voortrekkers at Blood River.

- 1) Name this African tribe which was led by Shaka.
- 2) One innovation introduced by Shaka was the introduction of a short stabbing version of this weapon also used by Greek hoplites. Pikes are a longer version of this weapon.
- 3) Conflict between the aforementioned tribe and Europeans took place in this modern day nation with three capitals at Bloemfontain, Pretoria, and Johannesburg.

ANSWERS:

- 1) **Zulu**
- 2) **Spear**
- 3) Republic of **South Africa**

Bonus Seventeen
Geography (3 Parts)

This nation is home to the Incan structure of Machu Picchu.

- 1) Name this South American nation with capital at Lima.
- 2) This other South American country is known for its petroleum industry. It is led by President Hugo Chavez.
- 3) This Argentinean city is famous for its carnival and statue of Christ the Redeemer.

ANSWERS:

- 1) **Peru**
- 2) **Venezuela**
- 3) **Rio de Janeiro**

Bonus Eighteen
Life Sciences (4 Parts)

Toothed kinds of this marine mammal have the ability to use echolocation, and types include the gray and sperm.

- 1) Name these very large members of order *Cetacea*.
- 2) This is the largest species of that animal, as well as the largest animal ever to exist. The largest one ever captured weighed nearly 400,000 pounds.
- 3) Many of those aforementioned animals use this tooth-like filtering system to eat plankton.
- 4) That system is also used by this type of the aforementioned marine mammal named after its shape which is famous for its songs.

ANSWERS:

- 1) **whales**
- 2) **blue** whale
- 3) **baleen**
- 4) **humpback** whale

Bonus Nineteen
Other Art (3 Parts)

Answer some questions about the Parthenon for ten points each.

- 1) The Parthenon has slanted versions of this type of structure used just to hold up ceilings in order to preserve the illusion of straightness from a distance.
- 2) The Parthenon was the greatest example of this order of Greek architecture known for its simple columns which lacked a base and decorations along its top and bottom.
- 3) The Parthenon, along with a lot of other examples of ancient Greek architecture, is found in this citadel on a hill in Athens.

ANSWERS:

- 1) **Columns** [prompt on **Pillars**]
- 2) **Doric** Architecture
- 3) the **Acropolis**

Bonus Twenty
Geometry (4 Parts)

A rectangle is four inches longer than it is wide and has a perimeter of 24 inches.

- 1) Find the length of the rectangle in inches.
- 2) Find the width of the rectangle in inches.
- 3) If the rectangle is the base for a prism with a volume of 120 cubic inches, find the prism's height.
- 4) Find the area of the rectangle in square inches.
- 5) In inches, find the exact length of the rectangle's diagonal using square roots.

ANSWERS:

- 1) 4 inches
- 2) 8 inches
- 3) 5 inches
- 4) 32 square inches
- 5) $\sqrt{80}$ inches or $4\sqrt{5}$ inches

-----Replacement Bonuses-----

Replacement Bonus One American History (5 Parts)

It was involved in the Pig War.

- 1) Name this country invaded by the United States in the Revolution when Benedict Arnold attempted to capture Quebec.
- 2) Another American invasion of the aforementioned country occurred during this war, which saw the penning of the Star Spangled Banner and the burning of Washington D.C.
- 3) One cause of the aforementioned war was this British practice, which saw British warships kidnap American sailors and force them to join the Royal Navy.
- 4) The last battle of the aforementioned war was this one, where a combination of US troops, pirates, and Native Americans halted an invasion of the South.
- 5) This future president led US troops at the aforementioned battle.

ANSWERS:

- 1) **Canada**
- 2) **War of 1812**
- 3) **Impressment**
- 4) Battle of **New Orleans**
- 5) Andrew **Jackson**

Replacement Bonus Two American Literature (4 Parts)

Answer some questions about the novel *The Call of the Wild* for ten points each.

- 1) This man wrote *The Call of the Wild*.
- 2) This dog, the protagonist of *The Call of the Wild*, is owned by Thornton before eventually joining a pack of wolves.
- 3) This other novel by the aforementioned author is also about a dog, the title figure who becomes a fighting dog before being saved by Weedon Scott.
- 4) Both *The Call of the Wild* and the aforementioned novel are set in this territory of Canada, the namesake of a famous gold rush.

ANSWERS:

- 1) Jack **London**
- 2) **Buck**
- 3) **White Fang**
- 4) The **Yukon**

Replacement Bonus Three Physics (3 Parts)

Name some famous physicists.

- 1) This Italian discovered the four largest moons of Jupiter with a telescope before being placed under house arrest by the Church for claiming that the earth revolves around the sun
- 2) This Danish physicist helped with the formulation of quantum mechanics and proposed his namesake model of the atom, in which electrons orbited around the nucleus.
- 3) This theoretical physicist discovered that black holes emit his namesake radiation. He also wrote the bestseller *A Brief History of Time*, despite being paralyzed with ALS.

ANSWERS:

- 1) **Galileo Galilei** (accept either)
- 2) Niels **Bohr**
- 3) Stephen **Hawking**