



**Question #1: Literature – Mythology**

*10 points*

This character forced **Helios** [HEE-lee-ohss] into lending a golden goblet by aiming an arrow at the sun god. Hera forced **Eileithyia** [ih-lih-“THIGH”-uh] to make sure this figure was born after his cousin to prevent this person from becoming the king of **Mycenae** [MIE-suh-nay]. After stealing the Delphic tripod, this character was forced to don women’s clothes in the service of **Omphale** [ohm-FAH-lee]. This character obtained the Golden Hind of **Artemis** [AHR-teh-mis] and the girdle of **Hippolyta** [hah-poh-“LIE”-tuh] after killing the **Nemean** [NEE-mee-un] Lion and the Hydra. Name this Greek mythical hero who was forced to perform 12 labors.

**Heracles** or **Hercules**

**Question #2: Science – Health**

*10 points*

In 2015, Canadian researchers found that high levels of this vitamin in children are associated with low levels of bad cholesterol. One type of this vitamin is synthesized in the body from cholesterol. This vitamin is given to patients with low levels of phosphorus and calcium because it helps regulate those nutrients. A deficiency of this vitamin causes adults to experience **osteomalacia** [AHSS-tee-oh-muh-LAY-shuh], which is a softening of the bones. This vitamin is often added to milk to lower the incidence of rickets. Name this vitamin that can be synthesized in people’s skin if they are exposed to sunlight.

Vitamin **D** [or **cholecalciferol** or Vitamin **D3**]



**Question #3: Fine Arts – Composers of the Modern Era**

10 points

<p>This composer wrote <i>Fireworks</i> for Nikolai Rimsky-Korsakov’s daughter. A performance of that piece with <i>Scherzo fantastique</i> [“SCARE”-tsoh fahn-tahs-teek] led to this composer getting a commission from <b>Sergei Diaghilev</b> [SAIR-gay dee-AH-guh-lef]. Before collaborating on <i>Pulcinella</i> [pull-chee-NAY-lah], Diaghilev and this composer produced a ballet featuring Prince Ivan Tsarevich and a sorceror named <b>Kashchei</b> [kash-CHAY], about a creature with magic feathers. This composer wrote another piece that caused a riot at its 1913 premiere and features a woman dancing herself to death. Name this Russian composer of <i>The Firebird</i> and <i>The Rite of Spring</i>.</p>	<p>Igor (Fyodorovich) <b>Stravinsky</b></p>
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**Question #4: Social Studies – U.S. History**

10 points

<p>This event, which took place next to Clara Harris and Henry Rathbone, led to the summoning of Charles Leale. Mary Surratt was executed for her role in this event. During the manhunt that followed, Dr. Samuel Mudd set a broken leg and Richard Garrett’s barn was burned down. At the same time this event happened, Lewis Powell failed to stab William Seward. It took place during a performance of <i>Our American Cousin</i>, and its perpetrator said, “Sic semper tyrannis!” Name this act perpetrated at Ford’s Theater by John Wilkes Booth.</p>	<p><b>assassination</b> of Abraham <b>Lincoln</b> [accept similar answers that include <b>Lincoln</b> and the notion of killing or shooting]</p>
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**Question #5: Literature – World Literature**

10 points

Melantho uncovered this character's scheme regarding a burial shroud. This character's order to **Euryclea** [yur-ih-KLEE-uh] to move their bed was used to determine whether a beggar was actually her husband. She also mandated that one must fire an arrow through a series of axe-heads using the bow of her absent husband; while waiting for that husband to return from war, she turned down 108 suitors. This woman was the daughter-in-law of **Laertes** [lay-AIR-teez] and the mother of **Telemachus** [teh-LEM-uh-kuss]. Name this faithful wife from Homer's *Odyssey*.

**Penelope**

**Question #6: Science – Physics**

10 points

The energy of these particles can be calculated using the Geiger-Nuttall law. George **Gamow** [GAM-awf] modeled the formation of these particles as a tunneling process. Ernest Marsden and Hans Geiger performed an experiment using these particles that disproved the plum pudding model and suggested that atoms have a distinct nucleus. That experiment, conducted in the lab of Ernest Rutherford, involved shooting these particles at a sheet of gold foil. Name these particles equivalent to helium nuclei.

**alpha** particles [before "helium", accept **helium**(-4) **nucleus** or **helium**(-4) **nuclei**]



**Question #7: Social Studies – World History**

*10 points per part*

This son of <b>Jahangir [jah-HAHN-geer]</b> ordered the creation of the Peacock Throne.		
<b>1</b>	Name this leader who was frequently advised by his father-in-law, Asaf Khan. This man’s eldest son, Dara <b>Shikoh [SHEE-koh]</b> , lost the struggle to replace him.	Shah <b>Jahan</b> [accept Prince <b>Khurram</b> ]
<b>2</b>	Shah Jahan was the penultimate ruler of this south Asian dynasty, founded by Babur.	<b>Mughal</b> dynasty
<b>3</b>	Shah Jahan’s son <b>Aurangzeb [or-ang-ZEB]</b> placed the former ruler under house arrest in this structure built for Mumtaz, Shah Jahan’s wife. This <b>mausoleum [maw-suh-LEE-um]</b> is located in Agra.	<b>Taj Mahal</b>

**Question #8: Social Studies – World History**

*10 points per part*

The Zimmerman telegram was an attempt to persuade this country to enter World War One.		
<b>1</b>	Name this country where <b>Agustín de Iturbide [ah-goo-STEEN day ee-toor-BEE-day]</b> and Maximilian both claimed the title “Emperor”. This country is now headed by <b>Enrique Peña Nieto [en-REE-kay “PAIN”-yah nee-AY-toh]</b> .	<b>Mexico</b> [or <b>México [MAY-hee-koh]</b> ]
<b>2</b>	Maximilian was urged to take over Mexico by this French ruler, who led an 1851 coup. He fled shortly after being captured during the Battle of <b>Sedan [say-daw]</b> in 1870.	<b>Napoleon III</b> [or <b>Louis-Napoleon</b> Bonaparte; prompt on <b>Bonaparte</b> ; do not accept “Napoleon” or “Napoleon Bonaparte”]
<b>3</b>	Maximilian was overthrown by this Mexican president, who served terms before and after Maximilian’s rule.	<b>Benito (Pablo) Juárez [bay-NEE-toh WAH-rez]</b> (García)



**Question #9: Literature – U.S. Literature**

*10 points per part*

This poem is set during “the darkest evening of the year”.		
<b>1</b>	Name this poem in which the narrator’s horse shakes his harness bells, as he “thinks it queer / to stop without a farmhouse near”.	<b>“<u>Stopping by Woods on a Snowy Evening</u>”</b>
<b>2</b>	This author of “Stopping by Woods on a Snowy Evening” read his poem “The Gift Outright” at the inauguration of John F. Kennedy.	Robert (Lee) <b>Frost</b>
<b>3</b>	In this Frost poem, the narrator and his neighbor utter the phrase “stay where you are until our backs are turned”, a spell used to balance the boulders of the title dividing structure.	<b>“<u>Mending Wall</u>”</b>

**Question #10: Literature – U.S. Literature**

*10 points per part*

Following a vision of Jesus that restored his faith, he refused to divulge information regarding Cassy and Emmeline’s escape.		
<b>1</b>	Name this character who kept a silver dollar and lock of hair around his neck that Sambo said were a gift from a witch. Those objects were chucked into a fire.	Uncle <b>Tom</b>
<b>2</b>	Uncle Tom was created by this author, whom Abraham Lincoln allegedly described as “the little woman who wrote the book that made this great war”.	Harriet Beecher <b>Stowe</b>
<b>3</b>	George Selby was unable to prevent Uncle Tom’s death at the hands of this plantation owner.	<b>Simon Legree</b> [accept either]



**Question #11: Science – Biology**

*10 points per part*

In bacteria, this structure is primarily made of <b>peptidoglycan [PEP-tih-doh-GLY-kan]</b> .		
<b>1</b>	Name this structure that surrounds the plasma membrane in some species. It is found in plants and fungi, but not in animals.	<b>cell wall(s)</b> [do not accept “cell(ular) membrane(s)”]
<b>2</b>	In plants, much of the cell wall is composed of this <b>polysaccharide [“poly-SACK-uh-ride”]</b> , which consists of <b>glucose [GLOO-kohss] monomers [MAH-noh-murz]</b> connected by <b>beta-1,4 glycosidic [BAY-tuh “one four” GLY-koh-SID-ik]</b> bonds. Humans cannot digest this compound.	<b>cellulose</b>
<b>3</b>	The amount of peptidoglycan in the cell wall determines whether or not a bacterium will retain crystal violet in this technique, which uses <b>safranin [SAF-ruh-nin]</b> or <b>fuchsin [FOOK-sin]</b> as counter-stains.	<b>Gram stain(ing)</b> [prompt on <b>staining</b> ]

**Question #12: Science – Biology**

*10 points per part*

The most common form of this hormone is <b>indole-3-acetic [IN-dohl “three” uh-SEE-tik]</b> acid.		
<b>1</b>	Name this class of hormones that promote growth in plants by causing cells to expand.	<b>auxins</b>
<b>2</b>	A hypothesis proposes that auxins release <b>expansins [“expanse-ins”]</b> under this sort of condition, which occurs when there is a high concentration of protons.	<b>acidic conditions</b> [or <b>low-pH conditions</b> ]
<b>3</b>	This other sort of plant hormone promotes stem elongation. It was discovered in rice with “foolish seedling” disease.	<b>gibberellins</b> [ <b>gib-ur-EL-in(z)</b> ] [or <b>gibberellic acid</b> ]



**Question #13: Fine Arts – Art History**

*10 points per part*

It ruled China from 1368 to 1644.		
<b>1</b>	Name this dynasty during which famous ceramics, especially vases, were created.	<b>Ming</b> [or <b>Great Ming</b> ]
<b>2</b>	During the Ming Dynasty, artists developed better ways to use cobalt to create this color.	(cobalt) <b>blue</b>
<b>3</b>	This type of enamelwork using metal filaments became popular during the Ming Dynasty. This style was imported from Europe and is similar to <b>champlevé</b> [sham-plah-vay].	<b>cloisonné</b> [klwah-sawn]

**Question #14: Fine Arts – Art History**

*10 points per part*

It is considered the largest religious structure in the world.		
<b>1</b>	Name this building constructed under King <b>Suryavarman II</b> [sur-yah-VAR-mahhn “the second”] of the <b>Khmer</b> [k’MAIR] Empire.	<b>Angkor Wat</b> [or <b>Prasat Angkor Wat</b> or <b>Nokor Wat</b> ]
<b>2</b>	Angkor Wat is in this modern-day nation, which displays the building prominently on its flag.	<b>Cambodia</b> [or Kingdom of <b>Cambodia</b> or Preahreacheanachakr <b>Kampuchea</b> ]
<b>3</b>	This temple in Angkor Thom, Cambodia built under King <b>Jayavarman VII</b> [jai-yah-VAR-mahn “the seventh”] features over 200 large stone faces.	Prasat <b>Bayon</b>



**Question #15: Miscellaneous – Journalism**

10 points

<p>One publisher of this newspaper, who started its Neediest Cases Fund after seeing somebody dressed shabbily on Christmas, was Adolph Ochs [rhymes with “fox”]. This newspaper published the ad “Heed Their Rising Voices”, which led to a lawsuit by Montgomery Public Safety Commissioner L. B. Sullivan. Neil Sheehan published the <i>Pentagon Papers</i> in this newspaper. Will Shortz edits the crosswords for this paper. It is known as “the Grey Lady” and its motto is “All the news that’s fit to print.” Name this newspaper headquartered in New York.</p>	<p><i>The <u>New York Times</u></i> [prompt on <b>Times</b> before “New York”; accept it thereafter]</p>
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**Question #16: Mathematics – Math Concepts**

10 points

<p>Euler’s [OY-ler’s] theorem in geometry uses two different values of this quantity to find the distance between two triangle centers. One of these quantities is calculated by dividing half of a triangle side length by the sine of the opposite angle in the law of sines. In a different context, this value equals the reciprocal of curvature. In a regular polygon, this value is the distance from the center to any vertex, while for a circle, it equals the square root of the quantity area divided by pi, or the circumference divided by two pi. Name this value equal to half the diameter of a circle.</p>	<p><b>radius</b> [or <b>radii</b>; accept <b>inradius</b> or <b>circumradius</b>]</p>
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**Question #17: Social Studies – U.S. History**

10 points

This state was the site of the robbery at the center of the case *Gideon vs. Wainwright*. Most of its territory was obtained by the US in the Adams-Onís [oh-NEES] treaty. Juan Ponce de León [WAHN POHN-say day lay-OHN] explored most of this state on behalf of Spain. Andrew Jackson invaded what is now this state in 1818, provoking the First Seminole War. This state contains the oldest continuously occupied European settlement in the U.S., St. Augustine, which is south of Jacksonville. Name this southeasternmost state in the U.S.

Florida

**Question #18: Science – Chemistry**

10 points

An allotrope [AAL-oh-“trope”] of this element is the largest compound that has been used in the double-slit experiment. Another allotrope of this compound was believed to be extremely difficult to isolate until Andre Geim [gaym] and Konstantin Novoselov [KOHN-stahn-teen noh-voh-SEL-awf] isolated it using Scotch tape. This element can exist in a form where 60 atoms of it form a soccer-ball shape, or as a stack of hexagonal sheets. A valuable allotrope of this element defines 10 on the Mohs hardness scale. Name this element that makes up buckyballs, graphene, and diamonds.

carbon



**Question #19: Literature – Grammar/Usage**

10 points

Carl Meissner’s *Phrasebook* is a common text for people learning this language. Immanuel Kant used phrases in this language to differentiate whether or not knowledge is based on experience. This language is inscribed on the *Lapis Niger* [LA-pis NEE-gehr]. St. Jerome’s Biblical commentaries were written in the vernacular form of this language, also called Vulgar. It is the official language of the Holy See, and the ancestor of the Romance languages. Name this “dead” language used by Virgil and other residents of ancient Rome.

Latin

**Question #20: Social Studies – Religion**

10 points

Protected by *Muchalinda* [MOO-kah-LIN-dah] during a tempest, this person turned a flaming discus into a carpet of flowers. The birth of this man was foretold when Queen Maya had a vision of a white elephant entering her womb. After Channa exposed this person to an old man, a sick man, a dead body, and an *ascetic* [uh-SET-ik], this person gave up his privileged upbringing. He attained enlightenment under a Bo tree, and espoused the Four Noble Truths and the Eightfold Path. Name this founder of an eastern religion, who was born Siddhartha Gautama.

the Buddha [accept Siddhartha or Gautama before “Siddhartha”]



### Question #21: Mathematics – Algebra

10 points per part

When it is applied to complex numbers, this function is called the <b>modulus</b> [MAHD-joo-lus].		
<b>1</b>	Name this function which gives the distance from its input to zero on a number line. Its output is never negative.	<b><u>absolute value</u></b>
<b>2</b>	Find both solutions to the equation ten equals the absolute value of the quantity three minus $x$ .	<b><u>-7</u></b> and <b><u>13</u></b> [either order; “or” may be substituted for “and”; do not accept “7” in place of <b><u>-7</u></b> ]
<b>3</b>	Find the $y$ -intercept on the graph of $y$ equals six plus the absolute value of the quantity $x$ minus 3.	$y = \underline{\mathbf{9}}$ or <b><u>(0, 9)</u></b>

### Question #22: Mathematics – Algebra

10 points per part

For a system of two linear equations, this adjective is used if the number of solutions is finite.		
<b>1</b>	Give this term used to describe a system when each equation gives information that cannot be taken from the rest of the system.	<b><u>independent</u></b> system [or <b><u>independence</u></b> ; do not accept “dependent”]
<b>2</b>	Find the value of $x$ in the system with equations $2x$ minus $3y$ equals 6, and, $x$ plus $3y$ equals 9.	$x = \underline{\mathbf{5}}$ (and $y = \frac{4}{3}$ ) [accept $(x, y) = (\underline{\mathbf{5}}, \frac{4}{3})$ ]
<b>3</b>	Find the value of $k$ if the system $2x$ plus $8y$ equals 12, and, $3x$ plus $ky = 18$ , is <i>dependent</i> .	$k = \underline{\mathbf{12}}$



**Question #23: Literature – Mythology**

*10 points per part*

This god bested <b>Hymir</b> [“HIGH”-mir] in a contest by throwing a glass goblet at the giant’s head.		
<b>1</b>	Name this Norse god of thunder, the owner of <b>Mjollnir</b> [mee-YOHL-neer].	<b><u>Thor</u></b>
<b>2</b>	Hymir cut the line Thor used to catch this beast.	<b><u>Jormungandr</u></b> or the <b><u>Midgard Serpent</u></b>
<b>3</b>	According to the <i>Hymiskvidha</i> [HEE-miss-kuh-VEE-duh], Hymir was the father of this Norse god of war.	<b><u>Tyr</u></b> [teer]

**Question #24: Literature – Mythology**

*10 points per part*

This god owns an ebony throne and a hat that makes the wearer invisible.		
<b>1</b>	Name this brother of Zeus and Poseidon to whom people sacrificed black sheep. His realm is separated from Earth by the River Styx.	<b><u>Hades</u></b> [HAY-dees] [accept <b><u>Pluto</u></b> ]
<b>2</b>	When Hades wanted a wife, he kidnapped this daughter of <b>Demeter</b> [duh-MEET-ur]. As a result of eating pomegranates offered to her, Zeus declared that she must spend part of the year with Hades.	<b><u>Persephone</u></b> [pur-SEF-uh-nee] [accept <b><u>Proserpine</u></b> or <b><u>Kore</u></b> ]
<b>3</b>	After aiding in the kidnapping of Helen of Troy, this friend of Theseus sought to nab Persephone. Hades tricked this king and Theseus into sitting on a bench from which they could not rise of their own volition.	<b><u>Pirithous</u></b> [“pie”-RITH-oh-us]



### Question #25: Science – Physics

10 points per part

This scientist names a “golden rule” used to calculate transition rates for quantum systems.		
1	Name this Italian physicist who created the world’s first nuclear reactor, Chicago Pile-1.	Enrico <b>Fermi</b>
2	Wolfgang Pauli and Enrico Fermi predicted the existence of these leptons to account for the apparent violation of conservation laws during beta decay. These very light, neutral particles come in electron, muon, and tau flavors, which they can oscillate between.	<b>neutrinos</b> [do not accept “neutron(s)”]
3	Fermi and this scientist name a set of statistics that model <b>fermions</b> [FUR-mee-ahnz]. He proposed the existence of antimatter, and his name is given to the unit impulse delta function.	Paul (Adrien Maurice) <b>Dirac</b>

### Question #26: Science – Physics

10 points per part

The name for these particles was taken from a line in James Joyce’s <i>Finnegans Wake</i> .		
1	Name these subatomic particles that make up protons and neutrons. Like leptons, they come in six flavors.	<b>quarks</b>
2	These two quark flavors have the least mass. The other four flavors are top, bottom, charm, and strange.	<b>up</b> and <b>down</b> quarks [either order]
3	Both George Zweig and this physicist proposed the current model of quarks. This physicist introduced the Eightfold Way to classify baryons.	Murray <b>Gell-Mann</b>



**Question #27: Social Studies – U.S. Government**

*10 points per part*

Public pressure for what would become this amendment was greatly increased by David Graham Phillips’ series “The Treason of the Senate”.		
<b>1</b>	Name this constitutional amendment that allowed for the direct election of U.S. senators.	<b><u>17th</u></b> amendment
<b>2</b>	Prior to the 17th amendment, senators were chosen by state legislators, as specified in section 3 of this article of the U.S. Constitution.	Article <b><u>1</u></b> [ <b><u>1</u></b> ] [or <b><u>first</u></b> article]
<b>3</b>	The proposal that would become the 17th amendment was introduced in Congress by Joseph Bristow, a senator from this state. Bob Dole represented this state before resigning to run for president in 1996.	<b><u>Kansas</u></b>

**Question #28: Social Studies – U.S. Government**

*10 points per part*

Scott Walker is the only U.S. state governor to remain in office following this process.		
<b>1</b>	Name this procedure by which voters can remove an elected official before the end of his or her term.	<b><u>recall</u></b> election [accept <b><u>recall referendum</u></b> ; accept <b><u>recalling</u></b> ]
<b>2</b>	In 2003, Gray Davis was successfully recalled as the governor of this state due to a dispute over the state budget.	<b><u>California</u></b>
<b>3</b>	In the special election that followed Davis’ removal, this native Austrian was elected Governor of California. Like earlier California Governor Ronald Reagan, this governor had been in several Hollywood movies.	Arnold (Alois) <b><u>Schwarzenegger</u></b>



### Question #29: Mathematics – Math Concepts

10 points

When direction is taken into account, the product of three ratios is set equal to this number in **Menelaus'** [meh-nuh-LAY-us's] theorem. In **cis** [sis] form, this number can be expressed as "one cis pi". One version of **Euler's** [OY-lur'z] identity is that the natural log of this number equals pi times  $i$ , or equivalently,  $e$  to the  $i$  pi equals this number. Raising a number to this power is equivalent to taking a **reciprocal** [reh-SIP-ruh-kul]. Name this number that can be multiplied by any number to find its additive inverse.

**negative one** or **minus one**  
[do not prompt on "one"]

### Question #30: Literature – U.S. Literature

10 points

This poet mentioned a "rhyming tarantula" at the end of "A Familiar Letter". He wrote of an object that should be "given to the god of storms, the lightning and the gale". In another poem by this writer, the narrator instructs his soul to "leave thy low-vaulted past" until it leaves its "outgrown shell by life's unresting sea". That same soul was told to "build thee more stately mansions." He wrote another poem to prevent the scuttling of the USS *Constitution*. Name this author of "The Chambered Nautilus" and "Old Ironsides".

Oliver Wendell **Holmes**, Sr.



### Question #31: Social Studies – World History

10 points

Forces from the Esperanza Base on this landmass caused a diplomatic incident by firing on suppliers from the *John Biscoe*. This landmass was first sighted by Fabian von Bellingshausen. Over 50 countries have signed a treaty setting aside this landmass for scientific study and forbidding military action on it. James Clark Ross was the first person to cross a sea, now named for him, that borders it. Roald Amundsen was the first to reach its southernmost point. Name this continent that contains the South Pole.

Antarctica

### Question #32: Science – Biology

10 points

These organisms are the namesake of a compound that forms **lanosterol** [lan-oh-“STAIR”-awl], which becomes cholesterol and other steroids. Like rays, these animals contain **electroreceptors** [eh-LEK-troh-rih-SEP-turz] in their heads, called the **ampullae of Lorenzini** [AM-pyoo-lay “of ” lor-en-ZEE-nee]. Because they do not have swim bladders, these animals must constantly swim to prevent themselves from sinking. These **cartilaginous** [kar-til-AJ-ih-nus] fish contain many rows of teeth. Name this group of predatory fish that includes the hammerhead and the great white.

**sharks** [or **selachimorphia**; prompt on **cartilaginous fish** before mentioned]





### Extra Question #1: Mathematics – Math Concepts

10 points

<p>This is the simplest shape beyond a triangle constructed using a Carlyle circle, which is possible because its number of sides is a <b>Fermat [fair-mah]</b> prime. This shape has the fewest sides of any regular polygon that does <i>not</i> tessellate the plane. Each face of a dodecahedron has this shape. In this shape, the ratio of a diagonal length to a side length equals the golden ratio, and this shape has the same number of diagonals as sides. Each of its internal angles is 108 degrees, and each of its central angles is 72 degrees. Name this polygon with five sides.</p>	<p>regular <b>pentagon</b> [prompt on <b>5</b>-gon]</p>
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### Extra Question #2: Fine Arts – Classical Music & Opera

10 points

<p>In one opera by this composer, the aria “<b>Caro nome [KAR-oh NOH-may]</b>” is sung after a character pretends to be a student named <b>Gualtier Malde [GWAHL-tee-air MAHL-day]</b>. In another opera by this composer, the aria “Di Provenza il mar” is sung by <b>Giorgio Germont [JOR-joh jair-MOHNT]</b>, the father of Alfredo. Gualtier Malde is actually the Duke of Mantua, who is loved by Gilda in an opera by this composer and who sings “<b>La donna è mobile [lah DOH-nah ay MOH-bee-lay]</b>”. The title character of that opera is the duke’s hunchbacked court jester, Rigoletto. Name this composer of <i>La traviata</i>, who wrote about the love of <b>Radamès [rah-dah-MAYS]</b> for an Ethiopian slave in <i>Aida</i> [“eye”-EE-dah].</p>	<p><b>Giuseppe (Fortunino Francesco) Verdi</b> [joo-SEH-pee VAIR-dee]</p>
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### Extra Question #3: Literature – British Literature

*10 points*

<p>Cair Paravel is at the mouth of this region's Great River. Dwarves are referred to as "Sons of Earth" in this location, where Strawberry became the talking horse Fledge. A 1014 Calormen invasion of this region was defeated by the two Kings and Queens, who came to power after defeating Jadis the White Witch. Mr. Beaver explains that the true king of this region is a talking lion named Aslan. Name this fictional region accessed by the Pevensie children from Earth through a wardrobe, in novels by C.S. Lewis.</p>	<p><u>Narnia</u></p>
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### Extra Question #4: Science – Chemistry

*10 points*

<p>The <b>polydispersity</b> [<b>"poly"</b>-<b>"disperse"</b>-ih-tee] index describes the weight distribution of these molecules. University of Illinois alumnus Wallace Carothers developed new types of these molecules while working for DuPont. The stereochemistry of these molecules is called their <b>tacticity</b> [tak-TISS-ih-tee], which can be controlled using Ziegler-Natta catalysts. These molecules can be formed by "step-growth" or "chain-growth" reactions. Examples of these compounds include PVC, Teflon, and nylon. Name these large molecules, which are composed of smaller units called monomers.</p>	<p><u>polymers</u></p>
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**Extra Question #5: Social Studies – World History**

*10 points*

The aftermath of this agreement saw a dispute over control of Memelland, which became part of Lithuania. Under this agreement, Cameroon was placed under French control, while the British gained Togo. Though its terms were re-negotiated in the Dawes and Young plans, the initial amount of reparations was set at 132 billion marks. **George Clemenceau** [zhorzh **kleh-men-soh**], David Lloyd George, and Woodrow Wilson were among the negotiators of this agreement. Name this treaty that formally ended World War I.

Treaty of Versailles



### Extra Question #6: Science – Chemistry

10 points per part

One element in this group is the only one that forms a simple cubic lattice.		
1	Name this group found just to the left of the <b>halogens</b> [HAL-oh-jinz] on the periodic table.	<b>chalcogens</b> [CHAAL-koh-jinz] or <b>group 16</b> [accept <b>oxygen</b> group; or <b>oxygen</b> family]
2	This is the second-lightest member of the chalcogens. It naturally exists as an eight-membered ring, and it is known for being yellow and found in smelly compounds.	<b>sulfur</b> [accept <b>S</b> ]
3	Sulfur is above this element in the periodic table. This element is substituted for sulfur in some rare amino acids, and it is bound to cadmium in a common type of quantum dot.	<b>selenium</b> [accept <b>Se</b> ]

### Extra Question #7: Science – Chemistry

10 points per part

Reactions are slowed when an element changes to a heavier version of itself, which has this relation to the original.		
1	Give this term for atoms of an element with a different number of neutrons.	<b>isotopes</b> [or <b>isotopy</b> ]
2	This isotope of hydrogen is commonly substituted in NMR solvents due to its lack of a signal. It is a component of heavy water.	<b>deuterium</b> [doo-TEER-ee-um] [prompt on <b>Hydrogen-2</b> or <b>H-2</b> ]
3	This scientist and Stanislaw Ulam used deuterium and tritium in their design of the hydrogen bomb.	Edward <b>Teller</b>



**Extra Question #8: Literature – World Literature**

*10 points per part*

One novel set in this country centers on the Smales family, who rely on their former servant after a revolution.		
<b>1</b>	Name this country that banned that novel, Nadine Gordimer’s <i>July’s People</i> . It is the home country of Gordimer, J. M. <b>Coetzee</b> [KUUT-see], and Alan <b>Paton</b> [PAY-tun].	(Republic of) <b>South Africa</b> [prompt on “RSA”]
<b>2</b>	In this Gordimer novel, the body of a dead black man is found on Mehring’s farm.	<i>The <u>Conservationist</u></i>
<b>3</b>	<i>The Conservationist</i> , Gordimer’s novel about a white businessman who buys a farm, shared this literary prize in 1974. Originally only eligible to novels published in the United Kingdom, its eligibility was expanded in 2013 to include any novel written in English.	Man <b>Booker</b> Prize

**Extra Question #9: Literature – World Literature**

*10 points per part*

Following World War II, this person’s Argentine <b>nutria</b> [NOO-tree-uh] farm failed, as did his Frankfurt cement factory.		
<b>1</b>	Name this German industrialist who saved Polish Jews from the Holocaust, the subject of a novel by Thomas <b>Kenneally</b> [kuh-NAY-lee] that inspired a Steven Spielberg movie.	Oskar <b>Schindler</b>
<b>2</b>	Schindler’s scheme to save Polish Jews involved his employment of them in a factory in this city, the second largest in Poland.	<b>Kraków</b> [“CRACK-ow” or KRAH-koof]
<b>3</b>	Thomas Kenneally is from this country. His novel <i>The Chant of Jimmie Blacksmith</i> was inspired by a pair of <b>Aborigine</b> [ab-uh-RIJ-uh-nee] outlaws.	(Commonwealth of) <b>Australia</b>