

Round 1 1st Section Toss-up Questions

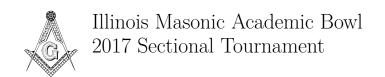
Question #1: Science – Chemistry

10 points

	J
When the liquid form of this substance is mixed	ammonia [accept NH ₃
with sodium, it turns a deep blue due to the	before the end]
presence of solvated electrons. Due to tunneling,	
this compound can undergo an inversion that is	
sometimes compared to an umbrella turning itself	
inside-out in wind. This compound reacts with	
oxygen at the beginning of the Ostwald process.	
This trigonal [TRIG-uh-nul] pyramidal compound	
is produced industrially using an iron catalyst and	
high pressures in the Haber-Bosch process. This	
compound, often found in fertilizer, is produced by	
reacting nitrogen and hydrogen. Name this weak	
base whose formula is NH ₃ [N H three].	

Question #2: Social Studies – Geography

The Pinelands National Reserve in this state	New Jersey
includes over one hundred thousand acres set aside	
as Wharton State Forest. The southern end of this	
state features Seven Mile Island on Cape May. The	
western boundary of this state is formed by	
Delaware Bay and the Delaware River, which can	
be crossed to reach this state from Wilmington,	
Delaware or from Philadelphia. Though New York	
controls Liberty Island, this state controls the water	
around it. Name this state whose most populous	
city is Newark [NOO-urk], and whose capital is	
Trenton.	



Round 1 1st Section Toss-up Questions

Question #3: Fine Arts – Classical Music & Opera

10 points

This composer worked with the cellist [CHEL-ist]
Wilhelm Fitzenhagen [VIL-helm FITS-in-hah-gun]
on a piece whose name is misleading because he
wrote the theme himself, Variations on a Rococo
Theme. This composer made references to God
Save the Tsar in his Festival Coronation March
written for Alexander the Third. One work by this
composer includes a divertissement
[dee-vair-teess-mawn] that ends with the "Dance of
the Reed Flutes" and "Mother Ginger" before
moving on to the "Waltz of the Flowers". In that
work by this composer, Drosselmeyer is the
godfather of Clara. Name this composer of The
Nutcracker.

Question #4: Mathematics – Math Concepts

vertical [accept up and
down before the end]



Round 1 1st Section Toss-up Questions

Question #5: Literature – U.S. Literature

10 points

The narrator of this story contrasts himself with madmen who "know nothing", and claims that he heard sounds from heaven and sounds from hell. This story ends with the narrator asking "Why does it not stop?". The protagonist of this story described the "eye of a vulture" that spurred him to take a man's life. Following the key act in this story, the narrator grabs chairs for the policemen who come to investigate, and he ends up sitting above the body hiding in the planks. Name this story by Edgar Allan Poe in which the title object — despite the victim's death — is still heard beating.

"The Tell-Tale Heart"

Question #6: Social Studies – World History

10 points

One of the people who held this position banished the Pure Land School due to that group's respectful treatment of women. National Foundation Day celebrates the first person to gain this position; the first 14 people to hold this position did so during the Legendary Period. After World War II, the holder of this position signed the Humanity Declaration, which Americans believed ended claims that these people were descendants of a goddess. That person with this position was Hirohito, while the first one was Jimmu. Name this position at the head of the monarchy of an Asian island country.

Emperor of Japan [or Japanese Emperor; prompt on emperor or on descriptive answers indicating the leader of Japan]



Question #7: Science – Biology

10 points per part

The	e first cranial nerve is named for, and carries,	
this	sense.	
1	Name this sense dependent on cells along the	sense of smell (ing) [or
	nasal cavity.	olfaction or olfactics
2	This structure — which contains the vomer	nasal <u>septum</u>
4		nasai <u>septuni</u>
	bone — separates the nostrils.	
3	Senses are processed in the brain by the	<u>limbic</u> system
	olfactory bulbs, which are part of this system.	
	It is responsible for emotions, long-term	
	memory, and behavior.	

Question #8: Science – Biology

Tho	organisms in the domains Archaea	
	9	
[ar-	KEE-uh] and Bacteria consist of this type of	
cell.		
1	What term describes a cell that has no	<u>prokaryotic</u>
	membrane-bound organelles, and in particular,	[PRO-kair-ee-AH-tik] cells
	no nucleus?	or prokaryote s
		[pro-KAIR-ee-"oats"]
2	Many prokaryotes contain this kind of circular	plasmid s
	DNA. When bacteria exchange DNA by	
	conjugation, it's usually this kind of DNA that	
	they exchange.	
3	This theory suggests that organelles like	endosymbiotic theory or
	mitochondria ["might-oh-CON"-dree-uh] and	endosymbiosis or
	chloroplasts [KLOR-oh-plasts] arose from one	$\underline{ ext{symbiogenesis}}$
	prokaryote essentially "eating," and	
	incorporating, a smaller prokaryote.	



Question #9: Literature – U.S. Literature

10 points per part

This	s play begins in the bedroom of Reverend	
Sam	nuel Parris's daughter, Betty.	
1	Name this drama in which Thomas Putnam	The <u>Crucible</u>
	uses a local hysteria to obtain more property,	
	despite the attempts of Mary Warren to expose	
	the hoax.	
2	This author satirized McCarthyism in <i>The</i>	Arthur (Asher) Miller
	Crucible.	
3	To ensure that his property would pass to his	press ing with stones
	sons, Giles Corey accepted his charge of	[accept <u>crush</u> ing to death
	contempt of court and was executed via this	or equivalents]
	method.	_

Question #10: Literature – U.S. Literature

In t	his poem, the speaker describes a man called	
"the	mightiest of magicians" who is guarded by	
"bla	ck pitch-water" and "fiery serpents".	
1	Name this poem set "On the shores of Gitche	"The Song of Hiawatha "
	Gumee [GIT-chuh GOO-mee]."	
2	"The Song of Hiawatha" is by this author, who	Henry Wadsworth
	wrote about an Acadian's search for Gabriel	$\underline{\text{Longfellow}}$
	Lajeunesse [lah-zhoo-ness] in "Evangeline".	
3	This grandmother of Hiawatha warned her	Nokomis [nuh-KOH-miss]
	daugher Wenonah [weh-NOH-nuh] about the	
	West Wind, but her words were not heeded.	



Question #11: Social Studies – Religion

10 points per part

Sign	nund Freud [froyd] wrote a book titled Moses	
and	this concept, which claimed that Moses was a	
follo	wer of Akhenaten [AHK-ih-NAH-tin]. It is	
poss	sible that Akhenaten originated this concept	
by b	panning the worship of any gods except Aten.	
1	What term refers to believing in only one god?	$\underline{\mathbf{monotheism}}$ or
		${f monotheist}$ ic
-		7
2	This monotheistic religion believes in the god	${f Zoroastrian}$ ism
	Ahura Mazda, and collects texts in The Avesta.	
3	During the 20th century in Vietnam, Ngo Minh	<u>Cao Dai</u>
	Chieu [goh min chee-yoo] became the first	
	person to worship this god. Depictions of this	
	god often include only his left eye.	

Question #12: Social Studies – Religion

This	s concept's sanchita type is represented by	
arro	ows in a quiver, and its <i>prarabdha</i>	
[pra	h-RAHB-dah] type by an arrow in flight.	
1	Name this idea in eastern religions, which	<u>karma</u>
	essentially means that good acts have good	
	consequences, and bad acts have bad	
	consequences, for the actor.	
2	Some of the earliest writings on karma are	<u>Upanishad</u> s
	sayings such as "The doer of good becomes	[oo-PAH-nee-shahdz] [or
	good" in these texts associated with Vedas. The	<u>Brihadaranyaka</u>]
	name of these texts means "sitting at the foot".	
3	In this religion, karma is an impurity of the	<u>Jain</u> ism
	soul. According to this religion, Mahavira was	
	the 24th tirthankara [teer-tahn-KAH-rah].	



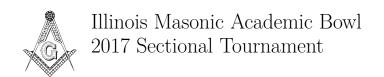
Question #13: Mathematics – Statistics

10 points per part

	e measure of this property, named for Karl	
Pea	rson, is represented by a lowercase r .	
1	Name this property of two variables, a measurement of how closely they are associated.	correlation coefficient [accept product-moment correlation coefficient]
2	If there are two data points on a graph, with one of them on the lower left and the other one on the upper right of the graph, find the correlation coefficient between their x and y coordinates.	1
3	The Pearson product-moment correlation coefficient measures how well data fits this type of function.	linear (polynomial) [accept first-degree polynomial or degree-1 polynomial, possibly with order in place of degree; prompt on polynomial]

Question #14: Mathematics – Statistics

The	e median of a set of numbers is also the second	
of t	hese numbers.	
1	Name these numbers that divide a set into four	$\underline{\mathbf{quartile}}_{\mathrm{S}}$
	groups of about equal size.	
2	The quartiles, along with the minimum and maximum, form the five-number summary that is displayed in this graphical depiction of a set.	box(-and-whisker) plot [accept "diagram" in place of "plot"]
3	Find the first quartile for the following list of seven numbers: 5, 6, 7, 8, 9, 10, 11.	<u>6</u>



Round 1 3rd Section Toss-up Questions

Question #15: Literature – World Literature

10 points

One novel by this author is set in a parallel universe where the rock band The Who is called The High Numbers, and Elvis Presley is named Jesse Garon Parker. That novel featuring the rock band VTO is *The Ground Beneath Her Feet*. In another of this author's novels, the narrator describes his birth on August 15, 1947. In another novel by this author, Allie Cone is killed by Gibreel Farishta, who had somehow survived an airplane explosion. Name this author who is still the target of a *fatwa* issued by Ayatollah Khomeini, and who wrote *Midnight's Children* and *The Satanic Verses*.

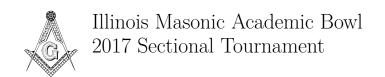
(Ahmed) Salman Rushdie

Question #16: Miscellaneous – Consumer Education

10 points

In the 1970s, the federal government set up Sallie	<u>S</u>
Mae to service these instruments, which can be	1
forgiven via the PSLF program by working in	
public service for ten years. Stafford ones may or	
may not be subsidized. The Perkins program offers	
them at a fixed rate, and they are allocated based	
on need. These items are offered through the PLUS	
program, which requires a parent to take on the	
debt. Name this form of debt incurred in order to	
cover tuition costs after high school.	

student loans [or college loans; prompt on loans]



Round 1 3rd Section Toss-up Questions

Question #17: Science – Earth Science

10 points

The bore type of this phenomenon causes whelps	<u>tide</u> s
and turbulence. The rule of twelfths is used to	
approximate the level of this phenomenon. This	
phenomenon is nearly nonexistent at amphidromic	
[am-fih-DROH-mik] points. The so-called brown	
type of this phenomenon is caused by	
phytoplankton ["FIGHT"-oh-"plankton"]. In some	
places slack water is maximized when this	
phenomenon is either at its high or low end. This	
phenomenon is low when the Sun and moon are at	
90-degree angles when viewed from Earth, which is	
called neap. This phenomenon is particularly	
extreme at the Bay of Fundy. Name this rise and	
fall of sea levels.	

Question #18: Social Studies – U.S. History

John Crittenden resigned from this position after	United States Attorney
President John Tyler vetoed bank bills. Shortly	<u>General</u>
after losing a Senate race against a dead person,	
John Ashcroft was appointed to this position.	
Robert Bork held this position temporarily after	
Elliot Richardson and his deputy William	
Ruckelshaus resigned rather than fire Archibald	
Cox. President Kennedy appointed his brother	
Robert to this position. Before becoming secretary	
of state, Edmund Randolph was the first person to	
hold this position in George Washington's cabinet.	
Name this position held by the leader of the	
Department of Justice.	



Round 1 3rd Section Toss-up Questions

Question #19: Literature – British Literature

10 points

This character was described as "courteous to all"	Alice [a
in a book about her "on the Stage". One character	$\underline{\text{Liddell}}$
tells this girl that the meaning of one word is	
something like badgers, lizards, and corkscrews.	
This character recites the poem "'Tis the Voice of	
the Lobster" before the Mock Turtle sings	
"Beautiful Soup". This character owns the cat	
Dinah, and erroneously cut a cake before	
distributing it. At other times, she changes size by	
eating cake. Name this fictional girl whose	
adventures, including her travel through the	
looking-glass, were written by Lewis Carroll.	

Alice [accept Alice Liddell]

Question #20: Science – Biology

10 points

A form of this substance is processed into 5.8S ["5 point 8 S"], 18S, and 28S units for processing to form ribosomes ["RYE"-boh-sohmz]. Another form of this substance contains an invariant T-psi-C ["T sigh C"] arm, which contains a pseudouridine ["pseudo"-YUR-ih-deen] residue. The secondary structure of this substance can include stem loops and pseudoknots. One form of this substance has a cloverleaf-shaped structure, contains anticodons ["anti"-koh-dahnz], and carries amino acids for translation. A DNA template is used in transcription to create the messenger form of this substance. Name this single-stranded molecule that carries genetic information.

RNA or ribonucleic
acid [accept more specific
answers; do not accept
"DNA" or
"deoxyribonucleic acid"]



Question #21: Mathematics – Geometry

10 points per part

Sup	pose a triangle's sides measure 4, 6, and 8	
unit	S.	
1	Find the semi-perimeter of the triangle.	9 units
2	Find the area of the triangle. Give your answer in simple radical form.	$3\sqrt{15}$ ["3 times the square root of 15" or "3 times radical 15"] units
3	What ancient mathematician is the namesake of the formula that gives the area of a triangle based on the semiperimeter and three side lengths?	Heron of Alexandria

Question #22: Mathematics – Geometry

This	s is the most general type of quadrilateral in	
whice	ch the diagonals must be the same length.	
1	Name this shape whose angles are all congruent,	$\underline{\mathbf{rectangle}}(\mathbf{s})$
	but whose sides might not all be.	
2	Find the area of a rectangle whose base	12 square units
	measures 4 units and the diagonal measures 5	
	units.	
3	Find the area of a circle circumscribed around a	<u>16π</u> ["16 (times) pi"]
	rectangle whose diagonals measure 8 units.	square units



Question #23: Social Studies – U.S. History

10 points per part

Con	s issue was studied by the Dillingham amission during the early 20 th century; their	
wor	k was used to support the Emergency Quota	
Act	of 1921.	
1	Name this process that during the late 19th and early 20th centuries often involved people	<pre>immigration or immigrating [accept</pre>
	being "processed" at Ellis Island.	answers indicating people
		moving to the <u>US</u> A]
2	This 1882 law signed by Chester Arthur	Chinese Exclusion Act
	prohibited all immigration of laborers from a	
	specific Asian country.	
3	The first sentence of this amendment states that	14th Amendment
	all people born in the United States, including	
	children of immigrants, are U.S. citizens.	

Question #24: Social Studies – U.S. History

New	spaper editor John O'Sullivan coined and	
pop	ularized this two-word phrase.	
1	Name this belief, popular in the 19th century,	manifest destiny
	that the United States was ordained to expand	
	across North America.	
2	The concept of manifest destiny was criticized	Whig Party or Whigs
	by this political party. It won the presidential	
	elections of 1840 and 1848.	
3	Manifest destiny was encouraged by this editor	Horace Greeley
	of the New York Tribune. There is some	
	controversy over whether or not this person	
	actually originated the phrase "Go West, young	
	man, and grow up with the country."	



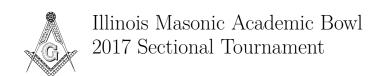
Question #25: Science – Chemistry

10 points per part

Lith	nium aluminum hydride ["hide-ride"] is often	
usec	d to promote this chemical process.	
1	Name this process of gaining electrons. When it occurs, another substance must be oxidized.	reduction [accept reducing or reduced; prompt on redox reaction]
2	This type of oxidation-reduction reaction produces water and either carbon monoxide or carbon dioxide, depending on whether it is incomplete or complete.	combustion reaction [prompt on burn ing]
3	This process is a type of corrosion in which silver is oxidized, often by sulfur.	tarnish ing

Question #26: Science – Chemistry

	his type of electron orbital, the azimuthal ih-MOOTH-ul] quantum number — also	
-	wn as the orbital angular momentum — equals	
zero).	
1	Name this type of orbital, the only type that	<u>s</u> orbital
	exists when the principal quantum number is 1.	
2	s orbitals usually contain two electrons. This is	alkali metals [prompt on
	the common name of the group of elements that	Group <u>One</u> or <u>1A</u> or
	has one electron in its outermost s orbital.	<u>lithium</u> group; do not
		accept answers containing
		"alkaline"]
3	For a arbitale the agreement of guardine purchas	magning superture
3	For s orbitals, the azimuthal quantum number	magnetic quantum
	is not the only one to equal zero. Name the	number [or \underline{m}_{ℓ}]
	other quantum number that always equals zero	
	for s orbitals.	



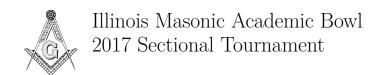
Question #27: Fine Arts – Art History

10 points per part

	painting of the ceiling of this chapel was	
com	missioned by Pope Julius II.	
1	Name this chapel painted by Michelangelo. Its altar wall includes his <i>The Last Judgment</i> .	<u>Sistine</u> Chapel [or Cappella <u>Sistina</u> or
		Sacellum <u>Sixtinum</u>]
2	This painting on the Sistine Chapel ceiling shows God's finger near the finger of a man.	The <u>Creation of Adam</u> [or <u>Creazione di</u> <u>Adamo</u>]
3	Surrounding nine scenes from the Book of Genesis, Michelangelo painted twelve people. The seven men are prophets, and the five	<u>sibyl</u> s
	women are this type of oracle.	

Question #28: Fine Arts – Art History

Lou	is Leroy criticized this painting by writing	
"Wa	llpaper in its embryonic state is more finished	
than	n that seascape."	
1	Name this painting that shows two small boats	<i>Impression, Sunrise</i> or
	in the port of Le Havre [luh hahv-ruh], and a	$\underline{Impression,\ soleil}$
	small red sun in the center.	\underline{levant}
		(0)
2	Impression, Sunrise was painted by this artist.	(Oscar-)Claude <u>Monet</u>
	He is known for several series of paintings,	[moh-nay]
	including one of <i>Rouen</i> [roo-en] Cathedral and	
	one of Haystacks.	
3	Several of Monet's paintings, including <i>Gare</i>	Musée d' <u>Orsay</u>
	Saint-Lazare [gahr sawn lah-zar], are on display	
	in this museum, which had been a train station.	



Round 1 5th Section Toss-up Questions

Question #29: Literature – U.S. Literature

10 points

In this novel, a once-occupied piano seat is referred	On The Road
to as "God's empty chair" following a performance	
at Birdland by George Shearing. A bout of	
dysentery [DISS-in-"Terry"] leads to one of the	
main characters of this novel being abandoned in	
Mexico City. In this novel, a character who is based	
on Neal Cassady leaves his wife Camille for	
Marylou, and then leaves Marylou for Inez. The	
characters Old Bull Lee and Carlo Marx in this	
novel are based on the real-life writers William	
Burroughs and Allen Ginsberg, who were friends of	
the author. Name this fictional travelogue that is	
narrated by Sal Paradise and was written by the	
Beat author Jack Kerouac ["CARE"-oh-ak].	

Question #30: Mathematics – Math Concepts

On a hyperboloid ["hi"-PUR-buh-loyd], Gaussian	negative numbers or
curvature will be this kind of number. This	<u>negative</u> s
adjective describes a variation on the binomial	
distribution in which the number of successes is	
chosen ahead of time instead of the number of	
trials. At points where a function's derivative is	
this kind of number, the function is decreasing. If a	
quadratic equation's discriminant is this kind of	
number, the equation has two complex solutions.	
This kind of number is less than its additive inverse.	
Name these numbers that are less than zero.	



Round 1 5th Section Toss-up Questions

Question #31: Social Studies – World History

10 points

In 2006, the prime minister of this country did not run for re-election because he suffered a massive stroke and entered a permanent vegetative state. In 1995, this country's prime minister was assassinated by Yigal Amir [yee-GAHL ah-MEER] following a rally in favor of the Oslo Accords. Bill Clinton helped this country negotiate the Wye River Memorandum, and Jimmy Carter encouraged this country's Menachem Begin [muh-NAH-kum BAY-gin] to sign the Camp David Accords with Egypt. Name this country that fought several of its neighbors in the Six-Day War and Yom Kippur War, and which has also had several conflicts with Palestinians.

(State of) <u>Israel</u> [or (Medinat) <u>Yisra'el</u>]

Question #32: Science - Physics

10 points

The divergence of the quantity density times this property of a flow is used to find the derivative of density with respect to time in the continuity equation that is used with the Navier [nahv-yay]-Stokes equations to explain fluid motion. A Wien [veen] filter is used to select particles in which this vector quantity equals electric field strength divided by magnetic field strength. Electron mobility times electric field gives this vector quantity for drifting electrons. The magnitude of this quantity squared divided by radius equals centripetal [sen-TRI-puh-tul] acceleration. This quantity is multiplied by mass to find momentum. Name this vector quantity whose magnitude can be measured in meters per second.

velocity [do not accept
"speed"]



Round 1 Extra Section Toss-up Questions

Extra Question #1: Social Studies – U.S. History

10 points

Justice Tom Clark wrote that the decision in this	<u>Miranda</u> v. Arizona
case "goes too far on too little", while the dissents	
"do not go quite far enough." Those dissents were	
written by Byron White and John Harlan. This	
case was found to not apply to prisoners in <i>Howes</i>	
v. Fields, and it was also weakened by Berghuis v.	
Thompkins. This case eliminated a person's	
admission of rape, though the person was later	
convicted anyways. Name this 1966 case that	
started in Phoenix and is the reason people accused	
of crimes are told "You have the right to remain	
silent."	

Extra Question #2: Mathematics – Math Concepts

	1
The solution to a homogeneous system can only	zero
include this number if the equations are	
independent. A system of equations is called	
homogeneous if one side of each equation equals	
this number. A matrix is <i>not</i> invertible if its	
determinant equals this number. An input to a	
function whose output is this number is called a	
root of the function, and this word is sometimes	
used as a synonym for "root". This is the largest	
number for which logarithmic functions do not give	
real outputs, and it's also the least number for	
which the square root function does give a real	
output. Name this number that cannot be divided	
by, and which is neither positive nor negative.	



Round 1 Extra Section Toss-up Questions

Extra Question #3: Fine Arts – Art History

10 points

Several museums are in this city's Barnsdall Art Park. A band shell in this city had arches that were concentric semicircles until it was renovated in 2004. This city's airport includes a building that looks like a round spaceship with four legs, the Theme Building. This city's philharmonic orchestra performs in a building covered with curved stainless steel panels that was designed by Frank Gehry ["Gary"], the Walt Disney Concert Hall. This city has a Walk of Fame honoring people and acts from the entertainment industry. Name this California city that contains the Hollywood Bowl.

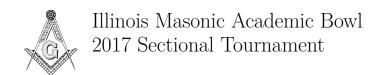
Los Angeles, California [or L.A.; prompt on "Hollywood"]

Extra Question #4: Literature – British Literature

10 points

This author wrote about a judge who "trades in Justice and the Souls of Men", Salathiel Lovell, who later sentenced this author to the pillory for writing The Shortest Way with the Dissenters. This author wrote about a woman who moved to Virginia after marrying her half-brother, and who is later imprisoned in Newgate. In another novel, this author described the rescue of a man who was held prisoner by cannibals and was renamed "Friday", though that novel is mainly about an Englishman stranded on an island. Name this author of Moll Flanders and Robinson Crusoe.

Daniel **Defoe** [accept Daniel **Foe**]



Round 1 Extra Section Toss-up Questions

Extra Question #5: Science – Astronomy

This adjective describes the blue bump in the	<u>big</u>
spectral energy distributions of active galactic	
nuclei. This adjective also describes a "rip" that	
the universe has been hypothesized to undergo	
eventually, making it infinite in size. Alternatively,	
this adjective also describes the "crunch" that the	
universe may eventually undergo if it eventually	
contracts. This adjective is used in the name of the	
asterism in Ursa Major that includes Merak and	
Dubhe, which are used to find the North Star.	
That asterism is shaped like a ladle. Give this	
adjective that also describes the "bang" believed to	
have started the universe.	



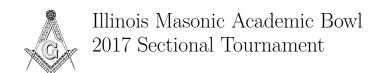
Extra Question #6: Literature – British Literature

10 points per part

r	The speaker of this poem claims that "every man			
kills the thing he loves".				
	1	Name this poem inspired by the hanging of	"The Ballad of	
		Charles Thomas Wooldridge that was written	Reading Gaol [RED-ing ja	<u>il]</u> "
		after its author spent two years in prison for		
		homosexual acts.		
	2	This Irish author wrote "The Ballad of Reading	Oscar (Fingal O'Flahertie	
		Gaol", as well as The Picture of Dorian Gray.	Wills) Wilde	
	3	While in prison, Wilde was only allowed to read	The Pilgrim's Progress	
		the Bible and this 17th-century allegory,	(from This World to That	
		written by a man who was imprisoned for	Which Is to Come;	
		holding a church service without the support of	Delivered under the	
		the Church of England.	Similitude of a Dream)	

Extra Question #7: Literature – British Literature

This	s speech describes the end of life as "sans	
teeth, sans eyes, sans taste, sans everything".		
1	Name this speech that describes a boy with a	Seven Ages of Man
	satchel "creeping like a snail unwillingly to	speech
	school." Its first five words are "All the world's	
	a stage."	
2	The "Seven Ages of Man" speech is given by	As You Like It
	Jaques [JAY-kez] in this Shakespeare play. This	
	play also features the cross-dressing Rosalind.	
3	This play contains a speech that begins	The Merchant of
	similarly to the Seven Ages of Man speech, in	\underline{Venice}
	which Antonio — the title character – says the	
	world is "A stage where every man must play a	
	part".	



Extra Question #8: Mathematics – Algebra

10 points per part

In t	he expression $5x^3$ ["5 x cubed"], the number 5	
is re	eferred to by this term.	
1	Give the term for a number that is multiplied	coefficient
	by one or more variables.	
2	Use the coefficients to find the limit, as x	$\frac{1}{3}$ [accept 0.3 repeating,
	approaches infinity, of the quantity $2x^2 - 5x + 7$	with the "3" repeated any
	["2 x squared, minus 5 x, plus 7"], end quantity,	positive number of times,
	divided by the quantity $6x^2 + 3x + 9$ ["6 x	but do not prompt if
	squared, plus 3 x, plus 9"].	"repeating" is missing]
3	Give the term used for the coefficient of the	leading coefficient
	highest-degree term in a polynomial, which is	<u></u>
	used to find limits of rational functions as x	
	approaches infinity.	

Extra Question #9: Mathematics – Algebra

A sequence is an ordered list of numbers.		
1	What term refers to the sum of a sequence?	series
2	What term describes a series that has a finite limit, even as the number of terms approaches infinity?	<pre>convergent [or converging; do not accept "divergent" or "diverging"]</pre>
3	Find the sum of the geometric series based on the sequence whose first two terms are 30 and 20.	90