Tournament 33
Round 12
Tossups

1. This woman purified the Argonauts for the murder of Apsyrtus (ap-SIR-tus). She turned Picus into a woodpecker for staying faithful to Canens, while her unrequited love for Glaucus led her to transform Scylla into a six-headed monster. This daughter of Helios, who lived on Aeaea (eye-EYE-uh), was subdued by a hero to whom Hermes gave the herb moly, which rendered him resistant to her (*) magic. For 10 points, name this witch who turned Odysseus's crew into pigs. ANSWER: Circe

014-13-75-12101
2. The "square" and "triangle" types of these entities only contain odd harmonics. These things have an associated phase and group velocity. These entities can superimpose in "constructive" or "destructive" interference. When they remain in a constant position, they are known as (*) "standing." One can obtain their namesake length by measuring the distance between successive crests and troughs. For 10 points, identify these oscillations that transfer energy.
ANSWER: waves
3. This architect reviewed the discarded designs for Jorn Utzon's Sydney Opera House and convinced his fellow jury members to give him the commission. This architect designed an auditorium with a roughly triangular-shaped dome named after Kresge, found on the MIT campus. This architect also designed an airport building with a distinctive curved roof, the ${ }^{(*)}$ ) TWA Terminal at JFK. This architect's best known design is a stainless steel structure shaped like a catenary curve. For 10 points, name the Finnish architect of the Gateway Arch.
ANSWER: Eero Saarinen
140-13-75-12103
4. This author said "there are in our existence spots of time, that with distinct preeminence retain a renovating virtue" in one work. That work includes his climbing of Snowdon and describes the "Growth of a Poet's Mind." He claimed he would rather be "a pagan suckled in a creed outworn" in a sonnet beginning, "The (*) world is too much with us." In another work, this man says he hears "these waters, rolling from their mountain-springs" even though "five years have passed" since visiting the title place. For 10 points, name this poet of "Tintern Abbey."
ANSWER: William Wordsworth
121-13-75-12104
5. This river's namesake Germans founded villages like Lauwe, but were sent to labor camps during World War II. A dam on the river created the Rybinsk Reservoir, and the Kama and Oka rivers are among its tributaries. Rising in the Valdai Hills, this river flows in a bend around Samara and empties into the (*) Caspian Sea. This river flows through such cities as Kazan, Nizhny Novgorod, and one formerly known as Stalingrad. For 10 points, name this longest river in Europe, which flows through Russia.

ANSWER: Volga River
6. In August 2012, Armenia broke diplomatic ties with this country after it released an Azerbaijani citizen who had killed an Armenian here. A leader of its Jobbik party was condemned in November 2012 for proposing that an index of Jewish government officials be maintained. The founder of its ruling party wrote in January 2013 that (*) Gypsies are "animals who behave like animals" in another scandal for the Fidesz (fid-ESH) government of prime minister Viktor Orban. For 10 points, name this country, which used to be part of a "dual monarchy" with its western neighbor Austria.
ANSWER: Hungary [or Magyarorszag]
7. Shortly prior to this event, Heinrich Muller sent a telegram instructing police not to interfere with this event's participants. The boxer Max Schmeling sheltered two boys during this event. It was precipitated by Herschel Grynszpan's (GRIN-shpahn) shooting of the diplomat Ernst vom Rath. Insurance payments to this event's victims were seized by the government, and the large-scale arrest of its victims resulted in the expansion of (*) Dachau and Buchenwald. For 10 points, name this event of November 9, 1938, a pogrom against Jewish people and property in Nazi Germany.
ANSWER: Kristallnacht [or Crystal Night; or Night of Broken Glass; prompt on November Pogroms]
030-13-75-12107
8. In one story by this author, the protagonist's grandfather is insulted when she wants to cut his beard. The protagonist of one of this author's stories thinks that Shirley T is the daughter of Mr. Whitaker. One of this author's novels is about a reunion of the Fairchild family as told by Laura McRaven. This author of (*) Delta Wedding also wrote about Phoenix Jackson's journey to Natchez to pick up medicine. In another story by this author, Sister has to move to the title location because of Stella-Rondo's mischief. For 10 points, name this author of "A Worn Path" and "Why I Live at the P.O." ANSWER: Eudora Welty
9. After winning the Battle of Edington, this man established a monastery on the island of Athelney for providing him with a stronghold. This man served as godfather to his former enemy Guthrum after Guthrum's baptism. This figure promoted the learning of Latin and translated Boethius' The Consolation of Philosophy and the Venerable Bede's Ecclesiastical History of the English People. This man's reign saw the compilation of the (*) Anglo-Saxon Chronicle begin. For 10 points, name this king of Wessex who successfully defended England from a Viking invasion.
ANSWER: Alfred the Great
030-13-75-12109
10. These structures show a double minimum at 208 and 222 nanometers in CD spectroscopy. A common DNA binding motif has two of these bridged by a turn. On a Ramachandran plot, this structure appears on the negative $x$-axis in both the second and third quadrants. These structures contain hydrogen bonds between the ith and i plus (*) fourth residue, which extends for 5.4 angstroms per turn. For 10 points, name this protein secondary structure that is complementary to the beta-sheet. ANSWER: alpha helix
11. This holiday can include gambling and it starts with the festival of Dhanteras. During this festival, homes are cleaned out in order to welcome the goddess of wealth. This festival takes place over five days starting in the month of $(*)$ Ashvin and ending in Kartik. It can celebrate the return to Amritsar of the imprisoned Guru Hargobind. For 10 points, name this Hindu religious festival that also involves many lamps, making it known as the festival of lights.
ANSWER: Diwali [or Divali]
12. Examples of these figures with non-integer Hausdorff dimensions include Barnsley's fern and the Gosper island. One type of this figure is the boundary between the prisoner set and escape set of a sequence of iterations, of a function of a complex number; that type of this entity is the Julia set. Benoit Mandelbrot is considered the founder of the study of these things. The (*) Koch snowflake and Sierpinski triangle are examples of these figures, whose perimeter is addressed by the "shoreline paradox." For 10 points, name these self-similar figures.
ANSWER: fractal
13. A jazz interpretation of one piece from this work was paired with a tribute to "Sweet Thursday" in a Duke Ellington album. The first version of this work included 26 movements, 8 of which were chosen in two equal groupings in the more familiar version. This work also includes a flute-and-oboe depiction of a sunrise and a piece which begins with a quiet tiptoe, but grows louder and faster to depict an ${ }^{(*)}$ ) escape from the title location. For 10 points, "Morning Mood" and "In the Hall of the Mountain King" are found in what suites based on an Ibsen play, composed by Edvard Grieg? ANSWER: Peer Gynt Suites [or Peer Gynt, Op. 23; or Peer Gynt Suite No. 1, Op. 46, or Peer Gynt Suite No. 2, Op. 55]

020-13-75-12113
14. In one of this man's plays, Marguerite tries to get the title character to ignore Marie and recognize his imminent death. This author of Exit the King wrote one play which includes audience noises after the Old Man and Old Woman jump into the ocean, and another in which the Martins visit the (*) Smiths and the title character "always wears her hair in the same style." He wrote a play in which Berenger is the only person not to turn into one of the title animals. For 10 points, name this absurdist Romanian-born author of The Chairs, The Bald Soprano, and Rhinoceros.
ANSWER: Eugene Ionesco [or Eugen Ionescu]
187-13-75-12114
15. Countries which shift away from producing food and into technology as their economies grow are practicing the "dynamic" form of this concept. Natural factors which give rise to this concept are accounted for in the Heckscher-Ohlin model. This idea was presented in The Principles of Political Economy and Taxation, using the example of English $\left(^{*}\right)$ cloth and Portuguese wine. For 10 points, name this David Ricardo-originated idea about trade, which explains why two countries may be better off trading in two goods even if one of them is more absolutely efficient at producing both goods.
ANSWER: comparative advantage
019-13-75-12115
16. The government of this man passed the Conspiracy and Protection of Property Act, which decriminalized trade unions. This man satirized John Murray's failed attempt to launch a newspaper in his novel (*) Vivian Grey. This man broke with Robert Peel and, as a leader with George Smythe of the Young England movement, he fought against the repeal of the Corn Laws. For 10 points, name this Conservative who twice served as British prime minister, was the political rival of William Gladstone, and was nicknamed "Dizzy."
ANSWER: Benjamin Disraeli
17. In one novel by this author, the title character becomes an assistant to Max Gottlieb and later stops the spread of plague in St. Hubert. In this author's first major novel, Carol Kennicott is heavily scrutinized by the residents of Gopher Prairie. (*) Riesling shoots his wife during a vacation in Maine with the title character in another of this man's novels, whose protagonist is unsatisfied with the life of the middle class. For 10 points, name this American author, whose novels include Arrowsmith, Main Street, and Babbitt.
ANSWER: Sinclair Lewis [or Harry Sinclair Lewis]
18. A doctor who fought in this battle refused to take a position of command under Artemas Ward, instead serving as a regular; that man, who died in this battle, was Joseph Warren. One side in this battle opposed Thomas Gage's plan to occupy Dorchester Heights. William Howe's troops led three assaults in this battle against troops on (*) Breed's Hill. Israel Putnam may have ordered in this battle, "Don't fire until you see the whites of their eyes." For 10 points, name this costly British victory in the Revolutionary War fought in Boston.
ANSWER: Battle of Bunker Hill [accept Battle of Breed's Hill before read]
023-13-75-12118
19. Early canvases by this artist include Male and Female and The She-Wolf. This artist embedded a key, several coins and thumbtacks, and some cigarette butts in another painting, whose title was taken from a speech in The Tempest. This artist of Full Fathom Five was heavily inspired by
American (*) Indian sand painting. He would often fling paint in a dance-like manner until he was satisfied with the canvas. For 10 points, name this American abstract expressionist artist known for his action painting and his nickname, "Jack the Dripper".
ANSWER: Paul Jackson Pollock
20. The Parchment model and the Russian doll model describe the multi-walled variety of these substances. This substance entirely consists of sp2-bonded atoms, and slicing a molecule of this substance lengthwise would produce graphene. Applications of this substance include (*) space elevators and combat jackets due to its incredibly high tensile strength. For 10 points, name this allotrope of carbon, a type of fullerene that has a cylindrical shape.
ANSWER: carbon nanotubes [prompt on fullerene; do not accept "buckminsterfullerene"]
048-13-75-12120
21. A recurring theme in this novel is a violin sonata composed by Vinteuil. It opens with the narrator recalling how he used to go to bed early. In this work, the Verdurins host a group of people including Odette de Crecy, who eventually marries (*) Charles Swann. This novel is composed of several volumes including Within a Budding Grove and Sodom and Gomorrah. It begins with its narrator recalling his past after eating a madeleine cookie. For 10 points, name this long novel written by Marcel Proust.
ANSWER: In Search of Lost Time [or Remembrance of Things Past; or $\underline{\text { A la Recherche du Temps Perdu }}$ ; or Swann's Way until "Within a Budding Grove" is read]
22. This period was ended by the signing of the Cullen-Harrison Act. George Remus became prominent and rich during this period, and Frank Costello claimed to have worked with Joe Kennedy during it. This period, started by the Volstead Act, saw the formation of the Untouchables under Eliot Ness. This period saw the rise of $\left(^{*}\right)$ gangsters such as Al Capone and the opening of many speakeasies. For 10 points, name this period initiated by the Eighteenth Amendment that banned the manufacture and sale of alcohol.
ANSWER: Prohibition
23. This structure encodes the AR receptor, and this structure's inability to undergo "crossing over" makes it susceptible to Muller's ratchet. This structure, which contains a pseudoautosomal region, has been shrinking for the last few (*) million years. Deletions in this structure often cause infertility, because genes like SRY on this structure are required for testes and sperm development. For 10 points, name this small chromosome that is only present in males.
ANSWER: $\underline{\mathbf{Y}}$ chromosome

1. This man defeated the Mahdist forces at the Battle of Omdurman in 1898. For 10 points each:
[10] Name this British general who then became governor-general of the Sudan and took part in the Fashoda Incident.
ANSWER: Horatio Herbert Kitchener
[10] Kitchener followed those actions up by serving in this war, which set Britain against the Transvaal and Orange Free State and was ended by the Treaty of Vereeniging.(vee-REE-nee-ging)
ANSWER: Second Boer War [or South African War]
[10] Kitchener then went to this country, where he feuded with its Viceroy, George Curzon, until Curzon resigned his post.
ANSWER: Republic of India [or Bharatiya Ganarajya]
023-13-75-12201
2. This man wrote an allegorical work called The Pilgrim's Regress. For 10 points each:
[10] Name this author who claimed that Jesus is a lunatic, a fraud, or God in a trilemma he proposed in his book Mere Christianity.
ANSWER: C. S. Lewis [or Clive Staples Lewis]
[10] In this epistolary novel by Lewis, the title devil and his pupil Wormwood unsuccessfully attempt to corrupt a young Englishman known as "The Patient."
ANSWER: The Screwtape Letters
[10] This earlier Christian author of the allegory The Holy War described Christian's travels to the Celestial City in The Pilgrim's Progress.
ANSWER: John Bunyan
030-13-75-12202
3. In this musical's finale, a chorus called the Tribe repeatedly sings "Let the Sunshine In." For 10 points each:
[10] Name this "American Tribal Love-Rock Musical" which premiered in 1968. It includes a controversial nude scene and a recitation of the "Hare (hah-RAY) Krishna" by its hippie characters.
ANSWER: Hair: An American Tribal Love-Rock Musical
[10] A band called The 5th Dimension tacked "Let the Sunshine In" onto their cover of this opening song of Hair. It heralds the "dawning" of an era when "peace will guide the planets / and love will steal the stars."
ANSWER: "The Age of Aquarius"
[10] This Czech-born director of One Flew Over the Cuckoo's Nest and Amadeus helmed the 1979 film adaptation of Hair.
ANSWER: Milos Forman
4. One character in this novel steals a mummy from a museum to worship as "the new jesus." For 10 points each:
[10] Name this novel about Hazel Motes's attempt to start the Church Without Christ.
ANSWER: Wise Blood
[10] Wise Blood was written by this woman. She wrote about the death of the Grandmother's family at the hands of the Misfit in her short story "A Good Man Is Hard to Find."
ANSWER: Flannery O'Connor [or Mary Flannery O'Connor]
[10] O'Connor lived in this Southern state, where she set many of her stories. This state was also home to Tara, the plantation in Gone with the Wind.

## ANSWER: Georgia

121-13-75-12204
5. This $6 / 8$ meter piece was intended to accompany the two-step, a dance form that later became synonymous with it. For 10 points each:
[10] Name this 1889 march commissioned for the essay contest awards ceremony of the title newspaper.
ANSWER: The Washington Post
[10] The Washington Post was composed by this American, best known for composing the The Stars and Stripes Forever and developing a namesake instrument.
ANSWER: John Philip Sousa
[10] Sousa played for this kind of ensemble belonging to the United States Marine Corps. This kind of ensemble frequently plays in parades and sporting events.
ANSWER: marching band
6. Answer some questions about work done at CERN, for 10 points each:
[10] The Large Hadron Collider recently announced the discovery of this boson that is predicted by the Standard Model and is responsible for imparting mass.
ANSWER: Higgs boson
[10] Some of the work at CERN is capable of proving or disproving this theory, which states that all fundamental particles are eleven-dimensional vibrations of one-dimensional objects.
ANSWER: superstring theory [or M-theory]
[10] Another phenomenon being tested at CERN is this idea, in which every bosonic particle has a fermionic partner and vice versa.
ANSWER: supersymmetry [or SUSY]
7. This hero ended up killing his son Connla because the latter could not reveal his name. For 10 points each:
[10] Name this hero of the Ulster Cycle. His lover was Fand and he defeated a dog to get his name.
ANSWER: Cuchulainn (coo-HOO-lin) [or Setanta]
[10] The Cuchulainn story comes from the pre-Christian society of this island, from which the Fenian cycle also originated.
ANSWER: Ireland
[10] Cuchulain used his toes to hurl this terrible spear, which opened into thirty barbs when it pierced its victim.
ANSWER: the Gae Bulga
8. Tessie Hutchinson ends this story shouting "It isn't fair!" before the town falls upon her. For 10 points each:
[10] Name this short story by Shirley Jackson about a small town tradition of drawing lots to decide whom to stone.
ANSWER: "The Lottery"
[10] "The Lottery" first appeared in this magazine. This magazine was founded by Harold Ross and early on published many stories and cartoons of James Thurber.
ANSWER: The New Yorker
[10] Another short story to debut in The New Yorker was "A Perfect Day for Bananafish" by this man. This man wrote about members of the Glass family in Frannie and Zooey.
ANSWER: J. D. Salinger [or Jerome David Salinger]
121-13-75-12208
9. Answer these questions about the cell cycle, for 10 points each.
[10] In diploid cells, this process of division into two equal cells occurs during the cell cycle's M-phase. ANSWER: mitosis
[10] Interphase, the long portion of the cell cycle between M-phases, contains this phase between the G1 and G2 gap phases. In this phase, DNA replication occurs.
ANSWER: $\underline{\mathbf{S}}$ phase [or synthesis phase ]
[10] The cyclin-dependent type of this class of enzymes promote transcription factors which move a cell through the cell cycle. In general, these enzymes phosphorylate their targets.
ANSWER: protein kinases [or cyclin-dependent kinases]
10. This leader took control of the Kanto region by defeating the Hojo clan. For 10 points each:
[10] Name this namesake of a Japanese shogunate that came to power after his victory at Sekigahara.
ANSWER: Tokugawa Ieyasu [or Tokugawa Shogunate; or Tokugawa Bakufu]
[10] In 1868, the Tokugawa Shogunate was deposed by this event, whose goals were espoused in the Charter Oath. Its namesake emperor had the given name Mitsuhito.
ANSWER: Meiji Restoration
[10] This war started in 1868 and helped further solidify the Restoration and the end of the Tokugawa Shogunate.
ANSWER: Boshin War
192-13-75-12210
11. Theodor Adorno claimed that after what happened at one of these places, "writing poetry is barbaric."

For 10 points each:
[10] Name these places, one of which Primo Levi remembered in his work If This Is a Man.
ANSWER: Nazi concentration camps [or extermination camps; or death camps]
[10] Another work based on experiences in a concentration camp, this novel is based on the much longer
And the World Remained Silent. Its narrator Eliezer describes seeing God die in the form of a hanged child.
ANSWER: Night [or La Nuit]
[10] Night was written by this Nobel laureate.
ANSWER: Elie Wiesel
12. The military showed their support for this man by shelling their country's own White House in a 1993 constitutional crisis between him and the Supreme Soviet. For 10 points each:
[10] Name this first president of the Russian Federation, who took power after the dissolution of the USSR. ANSWER: Boris Nikolayevich Yeltsin
[10] Yeltsin's last prime minister was this man, who served as President of Russia for most of the 2000s. He is often criticized for being too authoritarian.
ANSWER: Vladimir Vladimirovich Putin
[10] Yeltsin ordered the release of several confidential documents pertaining to this Korean Air Lines
Flight, which was shot down by a Soviet interceptor over the Sea of Japan in 1983.
ANSWER: Korean Air Lines Flight $00 \underline{7}$ [or KAL 007; or KE 00그
020-13-75-12212
13. The Cannon-Bard theory of this phenomenon holds that its cognitive and physiological components occur in parallel. For 10 points each:
[10] Name these phenomena whose varieties include anger, fear, and joy.
ANSWER: emotions
[10] The Cannon-Bard theory was developed in opposition to the theory devised by this man and Karl Lange. This author of Pragmatism created the nineteenth-century textbook Principles of Psychology.
ANSWER: William James
[10] Stanley Schachter and Jerome Singer developed this theory of emotion, according to which people determine they are experiencing an emotion due to arousal and then infer what emotion it is from their circumstances.
ANSWER: Stanley-Schachter two-factor theory
080-13-75-12213
14. This painting features the etching Black Lion Wharf in the background. For 10 points each:
[10] Name this painting that features an austere, seated maternal figure wearing a dark dress.
ANSWER: Arrangement in Grey and Black No. 1 [or Whistler's Mother; Moderator note: accept, but do not reveal this alternate answer if it is not given]
[10] This artist painted his mother in Arrangement in Grey and Black No. 1. Many of his works are titled for the predominant colors that they use.
ANSWER: James Abbott McNeill Whistler
[10] Another set of Whistler paintings is denoted by this musical term, a type of piece evocative of the night, many of which were composed by Chopin and Debussy.
ANSWER: nocturne
15. These stars generally have a mass between the Chandrasekhar and Tolman-Oppenheimer-Volkoff limits. For 10 points each:
[10] Identify these stars named for the fact that they consist almost entirely of the neutral particles found in the nucleus of an atom.
ANSWER: neutron stars
[10] The Chandrasekhar limit is the mass limit on what closely related type of star that consists almost entirely of electrons?
ANSWER: white dwarf
[10] Rotating neutron stars are given this name. They were discovered by Jocelyn Bell Burnell as radio sources that blink on and off at a constant frequency.
ANSWER: pulsars
16. This son of Haran was gotten drunk by his own daughters, who seduced him and bore the Moabites. For 10 points each:
[10] Name this man whose wife was turned into a pillar of salt when she looked back at the destruction of Sodom and Gomorrah as he fled.
ANSWER: Lot
[10] Lot and his herds traveled alongside this Biblical patriarch, who had previously travelled from Ur to Canaan.
ANSWER: Abraham [or Avraham; or Ibrahim; or Abram; or Avram]
[10] Abraham pleaded with God not to destroy Sodom, finally being promised that the city would be spared if only this number of righteous men could be found there. They were not.
ANSWER: ten
104-13-75-12216
17. This element's triplet form is a diradical, with two electrons in a pi antibonding orbital. For 10 points each:
[10] Name this second-period element which forms a double bond to itself in its diatomic gaseous form. ANSWER: oxygen [or $\underline{\mathbf{O}}$; or $\underline{\mathbf{O 2}}$ ]
[10] The triatomic allotrope of oxygen is this compound, which has a bond order of 1.5 . This oxidizing agent is present in a namesake layer in the stratosphere.
ANSWER: ozone [prompt on "O3"]
[10] One failure of valence bond theory is that it doesn't predict this behavior for liquid oxygen, but molecular orbital theory does. In molecules, this property arises from unpaired electrons which align in an external field.
ANSWER: paramagnetism [or word forms; prompt on magnetism or word forms]
190-13-75-12217
18. This Beethoven fan drinks milk laced with drugs, and his parents leave the fixing of his criminal behavior to a "post-corrective advisor" named P. R. Deltoid. For 10 points each:
[10] Name this character, whose attempts at "ultraviolence" are blocked by a feeling of sickness in his stomach after he is conditioned in jail by the Ludovico technique.
ANSWER: Alex DeLarge [or Alex DeLarge]
[10] Alex and his Nadsat-speaking teenage gang appear in this dystopian novel by Anthony Burgess.
ANSWER: A Clockwork Orange
[10] Another Anthony Burgess novel, Nothing Like the Sun, features this woman, the addressee of Shakespeare's last twenty-six sonnets, as a character named Fatimah.
ANSWER: the "Dark Lady"
104-13-75-12218
19. The Brady Bill was named after this President's Press Secretary, who was shot by John Hinckley, Jr. For 10 points each:
[10] Name this President of the 1980s who supported supply-side economic policies.
ANSWER: Ronald Wilson Reagan
[10] In 1986, Reagan elevated this man to Chief Justice of the Supreme Court, in which role he served until 2005.

ANSWER: William Hubbs Rehnquist [or William Donald Rehnquist]
[10] Reagan nominated this man for the Supreme Court in 1987, but he was rejected as an extremist by 58 Senators and Anthony Kennedy was later approved without a dissenting vote.
ANSWER: Robert Heron Bork
20. Name these Florida cities, for 10 points each.
[10] This Duval County metropolis is Florida's largest by population; it also has the largest city limits of any city in the lower 48 United States.
ANSWER: Jacksonville
[10] This canal-crossed "Venice of America" is located on the Broward County side of Miami and is named for a U.S. army stockade built here during the Seminole war.
ANSWER: Fort Lauderdale
[10] This home to America's largest Santeria community, which once sued it for prohibiting animal sacrifice, is itself the sixth-largest city in Florida despite being located in Dade County near Miami.
ANSWER: Hialeah
019-13-75-12220
21. This site was discovered in 1939 near Woodbridge and may have been the burial site for the East

Anglian king Raedwald. For 10 points each:
[10] Name this burial ground in England that was filled with a number of artifacts, including 41 made of solid gold.
ANSWER: Sutton Hoo
[10] Sutton Hoo contained an example of this type of burial, in which items were placed with the deceased into the namesake vehicle and buried.
ANSWER: ship burial [or boat burial]
[10] An iconic find of Sutton Hoo was one of these objects. The one at Sutton Hoo includes a depiction of a man stabbing a rider's horse as the horse tramples the man.
ANSWER: helmets

