41. This composer's first clarinet concerto includes the Bärmann [bar-mahn] Cadenza written by the soloist who premiered it. Heinrich Bärmann was also the inspiration for this composer's *Concertino ["con-chair-TEE-no"] for Clarinet in E Flat Major*. After writing two piano concertos, this composer wrote a similar work he refused to call a concerto because it has only one movement. That work in F minor, with notes describing a woman waiting for her knight to return from battle, is his *Konzertstück* [KOHN-zairt-shtoork]. Paul Hindemith wrote a *Symphonic Metamorphosis of Themes by* this composer. Name this 19th-century German composer who also wrote the operas *Euryanthe* [oy-ree-AHN-tuh], *Oberon*, and *Der Freischütz* ["dare FRY-shirts"].

Answer: Carl Maria (Friedrich Ernst) von <u>Weber</u> [VAY-bur]

42. The Dirac equation changes this value by the *g*-factor minus 2, all divided by 2. For atomic nuclei, this value is often expressed in terms of a constant equal to elementary charge times h-bar over twice the proton mass. A similar formula giving this property for electrons uses the electron mass instead and is named for Niels Bohr. In general, this quantity can be calculated as charge times angular momentum over twice mass. For a loop of wire, this quantity's magnitude equals the current times the area enclosed by the loop. Name this vector quantity that is crossed with a vector representing an external magnetic field to calculate the torque on a di·pole.

Answer: <u>magnetic</u> dipole <u>moment</u> [prompt on dipole <u>moment</u>; accept <u>nuclear magnetic</u> dipole <u>moment</u> or <u>electron magnetic</u> dipole <u>moment</u>]

43. This leader ordered construction of the Long Walls that begin at the Kera·mei·kos cemetery he started and run to the port at Piraeus ["pie"-REE-uss] that he fortified. When silver was taken from Laurium [LAW-ree-um], this person convinced Athens to spend the money on tri·remes ["TRY-reams"]. Though this person was at first very popular in Sparta, the Spartans eventually tried to connect him to the traitorous general Pau·san·i·as. This person's populism led to major rivalries with Xanthippus [zan-THIP-uss] and Arist·i·des [uh-RIST-ih-deez], whom he ostracized but was later ostracized by. Name this Athenian leader who convinced Eurybiades [yur-ih-BY-uh-deez] to follow a strategy that defeated Xerxes [ZURK-seez] I of Persia at the Battle of Salamis [SAL-uh-miss].

Answer: <u>The·mist·o·cles</u> [thuh-MIST-oh-kleez]

44. This person was the original House sponsor of the Brady Handgun Violence Prevention Act. In 2008, this person released letters warning about the possible failure of IndyMac bank, which then went through one of the largest bank failures in U.S. history. This person became a senator by defeating Alfonse D'Amato [al-fahnz dah-MAH-toh] in 1998, and he most recently defeated Wendy Long in 2016. After being frustrated by Senate Republicans, President Trump contacted this person to negotiate deals on healthcare and immigration that supposedly might get through the Senate. Name this senator from New York who at the beginning of 2017 replaced Harry Reid as Senate Minority Leader.

Answer: (Charles Ellis) "Chuck" Schumer [SHOO-mur]

45. In one work by this writer, one of the title characters is killed in his sleep by Farlaf but is later revived and uses a ring to help the other title character. In that epic, a bride disappears on her wedding night. In a poem by this writer, Evgenii [yiv-GEN-ee] loves Parasha, whose house is destroyed, after which Evgenii goes mad. Evgenii's body is eventually found in a hut after he curses a statue that then comes to life. In a verse novel by this author, the title character meets the Larina sisters after developing a friendship with Vladimir Lensky. Name this author of *Ruslan and Ludmila*, *The Bronze Horseman*, and *Eugene Onegin* [yoo-ZHEEN ohn-YAY-gin].

Answer: Alexander (Sergeyevich) Pushkin

Check the score.

46. This term describes a linear combination whose coefficients are non-negative and sum to 1. The theorem that of any five points, some four of them define a quadrilateral with this property, is named the "happy ending theorem" because it led the person who proposed it—Esther Klein—to be married to George Szekeres [SEK-er-esh], who proved it with Paul Erdős ["AIR"-dush]. The gift-wrapping algorithm is used to find the smallest superset with this property that contains a given set, which is called the "hull" with this property. Jensen's inequality relates functions with this property to their integrals. A set has this property if any two points can be connected by a segment that is entirely within the set. Give this adjective for polygons that contain all their diagonals, whose internal angles thus all measure less than 180° ["180 degrees"].

Answer: convex

47. The polity that is now this country first established relations with Europe when an envoy traveled with Duarte Fernandes of Portugal to Malacca. That interaction occurred when this country's capital was Ayutthaya [ah-YOO-tuh-yuh]. This country opened up trade with England in the 19th century under the Bowring Treaty. This country moved its capital to Thonburi after its Burmese leaders were expelled by Taksin the Great; the Chakri dynasty succeeded Taksin and still rules this country. The last ten kings of this country were named Rama. Name this country formerly known as Siam.

Answer: (Kingdom of) Thailand [or (Ratcha-anachak) Thai]

48. This writer referred to the gap between public opinion and political outcomes as the "eclipse of the public", and he called for communication to create a great community. This author made those statements in a book that was, in part, a response to Walter Lippmann's *The Phantom Public*. Another book by this writer described its subject as a necessity of life, a social function, direction, and growth. That book by this author addressed conditions that improve the capacities of immature members of society. Name this founder of the the UChicago Laboratory Schools who wrote *The Public and its Problems* and *Democracy and Education*.

Answer: John <u>Dewey</u>

49. This writer depicted the transformation of Cuellar [kway-yar] from grade-grubbing to self-destructiveness after Cuellar is attacked by a Great Dane [pause] in "The Cubs". In a novel by this writer, one character tells stories and confuses his audience by giving a priest from Mendocita the same name as a Jehovah's Witness. That character, who gets confused himself, is Pedro Camacho. This writer portrayed life under dictator Manuel Odría [mahn-wel oh-DREE-ah] in *Conversation in the Cathedral*. Name this former Peruvian presidential candidate who wrote about falling in love with an older woman while working at a radio station in *Aunt Julia and the Scriptwriter*.

Answer: (Jorge) Mario (Pedro) <u>Vargas Llosa</u> [var-gahss YOH-sah] [prompt on partial last name]

50. Excessive pi·pe·colic [py-PEK-oh-lik] acid in blood makes this cell structure work improperly. Malformation of this structure causes diseases on the Zellweger spectrum. In non-human animals, this structure contains uric acid oxid·ase. Though in some animals the mito·chon·dria also play a role, this is the main site in which the beta-oxidation cycle breaks down fatty acids. This cell structure contains catal·ase [KAT-uh-"lace"], which catalyzes the breakdown into water and oxygen of the compound for which this organelle is named. Name this organelle responsible for the synthesis and destruction of H_2O_2 ["H two O two"].

Answer: <u>peroxi·some</u>(s)

This is the end of the packet.