

## AQBL October Set

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### Packet 4

1. **A quadrilateral is one of these shapes if the products of the sines of opposite angles are equal. In calculus, a technique for approximating integrals using these shapes is an average of left and right Riemann sums. “Right” forms of these shapes have two adjacent right angles, while (\*) “isosceles” forms of this shape have a pair of legs with equal length. Parallelograms can be considered a form of these objects, since they are quadrilaterals with at least one pair of parallel sides. For 10 points, name these shapes, which usually have parallel bases of differing lengths.**

ANSWER: trapezoids <Math/Other Science>

2. **The Phanariotes were a group of families from this modern-day country who were prominent in the Ottoman Empire. A revolt in this modern-day country was organized by the “Society of Friends” and prompted massacres in Constantinople and Smyrna. The London Conference of (\*) 1832 led to the establishment of this country, following a conflict in which the Ottomans, led by Ibrahim Pasha, were defeated by an alliance of Britain, France, and Russia. Lord Byron died in this modern-day country, whose first king was Otto of Bavaria. For 10 points, name this country where, from 1801 to 1812, Lord Elgin stole many sculptures from the Parthenon.**

ANSWER: Greece (accept Hellenic Republic) <European History>

3. **Large arches extending from the central concourse resemble a bird in flight at a railway station designed by Santiago Calatrava for one of these larger facilities. Another of these facilities was built on an artificial island and designed by Renzo Piano with sliding joints that helped it survive the (\*) Kobe Earthquake. A building at another one of these facilities has been repurposed into a luxury, 1960s-themed hotel; that building designed by Eero Saarinen has thin concrete shelves forming its roof and creating the appearance of two wings. For 10 points, name these facilities, one of which in Queens, New York now includes the TWA Hotel.**

ANSWER: airports (accept equivalents) <Other Fine Arts>

4. **This book does not include the Book of Lehi, a 116-page transcription of which was supposedly lost by Martin Harris. The testimonies of the Three Witnesses and Eight Witnesses are normally published alongside the primary text of this book. A set of glasses and some seer stones allegedly used to (\*) translate this text are known as the Urim and Thummim. This book is said to have initially been written in “reformed Egyptian” on a set of golden plates revealed by the angel Moroni. For 10 points, name this holy book of a religion led by Joseph Smith and Brigham Young.**

ANSWER: Book of Mormon <Religion>

5. **Kate Shemirani and Mark Steele are Brits best known for opposition to this thing. In 2019, Geneva and Brussels suspended rollouts of this thing, which has been attacked by programming aired by RT America linking it to cancer and autism. Over 20 instances of (\*) vandalism related to this thing took place in the first week of April in the U.K., leading Youtube to block content connecting it to coronavirus. DDoS attacks may increase due to anticipated expansion of this technology causing a corresponding increase in the number of Internet of Things devices. For 10 points, name this cellular technology that uses higher-frequency radio waves than older generations.**

ANSWER: 5G (accept fifth generation cellular technology) <Current Events>

6. In a speech given as part of the program *Rendezvous with Destiny*, this person stated “a government can’t control the economy without controlling people.” Over 100 police officers were injured, and a student killed, when this governor sent in the Highway Patrol to shut down the People’s Park Protests in (\*) Berkeley. In a debate, this leader said he would not “exploit” his opponent’s “youth and inexperience,” and as President he fired ten thousand striking air traffic controllers. “Supply-side economics” were advocated for by, for 10 points, what Republican President succeeded by George H.W. Bush?

ANSWER: Ronald Reagan <American History>

7. Three of these beings legendarily divided an inheritance by stuffing gold in their mouths. The ancestor of these mythical figures was born from venom from Elivagar and drank from the milk of Auoumbra. Loki turned the goddess of youth into a nut after she was kidnapped by another of these beings, and the goddess of (\*) skiing, Skadi, is also one of these figures. Bestla, the mother of Odin, was one of these figures, and the earth, ocean, humans, and dwarves were all formed from parts of one of these figures. For 10 points, name these beings that include Thiazi and Ymir, who may not actually be unusually large.

ANSWER: jotunn (accept giants; prompt on Norse gods) <Mythology>

8. In a novel set in this city, one character becomes aware of an affair after watching his father play the tambourine. While at a wedding in this city, one character reveals that affair with a young singer; earlier, that father kicks his wife out after she is hit by a car. In another novel set in this city, children representing (\*) Moses, Jesus, and Muhammad grow up in the title alley. Amina, Yasin, and Aisha live under strict Islamic rules set by al-Sayyid Ahmad at their home in this city. *Children of Gebelawi* and *Palace Walk* are set in, for 10 points, what city, the subject of a namesake trilogy by Egyptian author Naguib Mahfouz?

ANSWER: Cairo <World/Misc. Literature>

9. This quantity is equal to the product of particle density, cross-sectional area, charge, and drift velocity. The Joule-Lenz law states that heat power from a conductor is proportional to resistance times the square of this quantity. This quantity is equal to the potential difference (\*) V divided by resistance according to Ohm’s law. Since electrons are the typical charge carriers in an electric circuit, this quantity is typically negative. For 10 points, name this quantity measured in amperes, the flow of electric charge through a region.

ANSWER: electric current (or I) <Physics>

10. One child in this novel is bought after her mother dies of shock, and is later brought to a convent. After a character in this novel is recognized during an act of philanthropy, he is tied up by a soldier who had saved Georges Pontmercy’s life while robbing corpses after (\*) Waterloo. The protagonist of this novel carries Marius through the sewers and avoids Thernardier before encountering a detective who later throws himself into the Seine. The protagonist spends 19 years in prison after stealing a loaf of bread in, for 10 points, what Victor Hugo novel, in which Jean Valjean is pursued by Inspector Javert?

ANSWER: *Les* Miserables (prompt on Les Mis) <European Literature>

11. In one work, this author distinguishes between actions that are voluntary, involuntary, in which choice is not made, and non-voluntary, in which someone takes improper action by choice. This author described potentiality as change in the “thing-in-itself, qua other” in a work in which he considered ousia, or being, to be a combination of matter and form in his theory of (\*) hylomorphism. “Categories” and “On Sophistical Refutations” are sections of a book on logic by this author, which introduced his namesake type of syllogism. The Lyceum was founded by, for 10 points, what author of *Organon*, *Metaphysics*, and *Nicomachean Ethics*?

ANSWER: Aristotle <Philosophy>

12. A small strip of land in this modern-day country was ceded to Germany in the Heligo-Zanzibar Treaty. Following the Battle of Waterberg, General Lothar von Trotha led an early 20th-century genocide of the Herero and Namaqua peoples in this modern-day country, which was finally granted independence in (\*) 1990 by the New York Accords, which also ended foreign involvement in the Angolan Civil War. This country was ceded Walvis Bay in 1994, and fought a brief secession movement in the Caprivi Strip. Windhoek is the capital of, for 10 points, what country formerly ruled by Germany and South Africa?  
ANSWER: Republic of Namibia <World History>

13. This poet stated “thou wilt not leave us in the dust” and “we have but faith: we cannot know” in a poem that describes “Nature” as “red in tooth and claw.” In another poem, the title figure desires to “sail beyond the sunset” and to “strive, to seek, to find, and not to (\*) yield.” This poet, who stated “Tis better to have loved and lost / than never to have loved at all” in a requiem for Arthur Henry Hallam, wrote “theirs not to reason why / theirs but to do and die” about the “six hundred” who rode “into the Valley of Death.” For 10 points, name this poet of “In Memoriam A.H.H.,” “Ulysses,” and “The Charge of the Light Brigade.”  
ANSWER: Alfred, Lord Tennyson <British Literature>

14. Adipocytes primarily store molecules of this type, which can be formed via the esterification of a compound made from acetyl-CoA. Acetyl-CoA is then regenerated from this class of molecules through beta oxidation. Molecules of this type are transported by the (\*) LDL and HDL proteins, and include one with formula  $C_{27}H_{46}O$  [C-27-H-46-O]. A subclass of these macromolecules is composed of three aliphatic chains connected to oxygens bonded to HC and  $H_2C$  groups, their glycerol backbone. For 10 points, name this group of macromolecules soluble in nonpolar solvents, whose subgroups include triglycerides and fatty acids.  
ANSWER: lipids (prompt on fats; ask to be less specific on fatty acids, triglycerides, or cholesterols) <Biology>

15. This team lost to Jose Mourinho’s Chelsea in a game where he wanted “at least two bookings for time-wasting before half-time,” leading the team to finish 2 points short of Manchester City in the 2014 season, when Chelsea was managed by Brendan Rogers. This team won a cup final after a handball by Moussa (\*) Sissoko earned them a penalty in the first minute; they had lost 3-1 to Real Madrid in 2018 but won the Champions League in 2019. In 2020, a 30-year title drought was ended by, for 10 points, what Premier League team managed by Juergen Klopp and fronted by Sadio Mane [Mahn-ay] and Mohammad Salah?  
ANSWER: Liverpool F.C. <Pop Culture>

16. In one sculpture by this artist, the seated subject stares to his left while holding his beard with his left hand and a set of tablets under his right arm. Vasari claims that this sculptor signed a sash after a work of his was attributed to Christoforo Solari. This sculptor used (\*) Carrara marble for a sculpture depicting a youthful Mary holding the dead Jesus, and included two horns on the head of a Moses sculpture for the tomb of Pope Julius II. In another of his sculptures, a muscular man holds a sling in his left hand. The *Pieta* and a marble *David* were sculpted by, for 10 points, what artist, who painted *The Last Judgement* for the Sistine Chapel.  
ANSWER: Michelangelo di Lodovico Buonarroti Simoni (accept either) <Visual Fine Arts>

17. In a poem titled for one of these animals, a man “rode over Connecticut / in a glass coach” and “mistook / the shadow of his equipage” for these creatures. That poem asks why “thin men of Haddam” imagine “golden” ones of these animals, another of which “beats his bars and he would be (\*) free” in “Sympathy” by Paul Laurence Dunbar. Wallace Stevens wrote a haiku-inspired poem about these animals, while, in another poem, one of them is “perched upon a bust of Pallas” and cries “Nevermore.” For 10 points, name this type of creature, a “caged” one of which “sings” in a Maya Angelou autobiography.  
ANSWER: birds (accept ravens or blackbirds or caged birds; also accept “Thirteen Ways of Looking at a Blackbird”) <American Literature>

18. At a battle in this region, a Roman army conducting a siege was in turn besieged by a relief force, who were then besieged by an additional Roman army. The Battle of Magetobriga, which was won by Ariovistus, led to Roman involvement in this region. The Battle of Alesia took place in this region, where military campaigns were fought against the (\*) Suebi, Arverni, and Helvetii. A set of *Commentaries* about a conflict in this region began with the statement that it is “divided into three parts.” Vercingetorix fought Roman troops led by Julius Caesar in, for 10 points, what region west of the Rhine and northwest of Italy?

ANSWER: Gaul (prompt on France) <Ancient/Misc. History>

19. In one form of this technique, increased conjugation of a molecule shifts the peak further to the left. In that version of this technique, the commonly measured transition is the  $\pi$  to  $\pi^*$  [ $\pi$ -star] transition. In another form of this technique, a distinctive peak between 1500 and 1800 inverse centimeters represents (\*) carbonyls, and peaks between 3200 and 3800 inverse centimeters represent alcohol groups. One form of this technique plots concentration against absorbance, and can be used to calculate concentration of visibly-colored samples. For 10 points, name this general analytical technique that comes in UV-Vis and Infrared, or IR [I-R], forms.

ANSWER: spectroscopy (accept UV-Vis spectroscopy or UV-Vis spectrophotometry before “1500”) <Chemistry>

20. One composer from this country included four-four, seven-four, three-eight, and five-four time signatures in the third and final movement of a piano suite written when he was 19. Another composer from this country opened a piece meant to be played “painfully” or “gravely” with a G major seventh followed by a D major seventh in his (\*) *Gymnopedies*. A third composer from this country included the movements “Dream of a Witches’ Sabbath” and “March to the Scaffold” in *Symphonie Fantastique*. For 10 points, name this home country of Erik Satie, Hector Berlioz, and Francis Poulenc, a member of “les six” [lays seese].

ANSWER: France (or French Republic) <Auditory Fine Arts>