

NAQTSM

National Academic Quiz Tournaments, LLC

Invitational Series #167A
Packet 1

Tossups

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1. **In April 2015 a section of this website featured a 60-second countdown tied to a large blue button. Ellen Pao resigned in 2015 as CEO of this website, which calls itself the (*) "front page of the internet." "The Donald" is a controversial subsection of— for 10 points— what site that hosts AMA's [A-M-A's]?**

answer: Reddit ["red it"] (accept www.reddit.com)

<436525>

2. **In one series by this author, a homeless teen awakens in a 540-floor hotel after he dies in Boston while trying to retrieve a sword. The hero of this author's (*) *Magnus Chase* series is cousins with Annabeth, a daughter of Athena. For 10 points— who wrote the *Camp Half-Blood Chronicles*?**

answer: Rick Riordan ["RYE"-ur-dun] (or Richard Russell Riordan Jr.)

<428076>

3. **The late Roman diocese ["DIE"-uh-siss] named for this region included the province of *Lugdunensis* [lug-doon-en-sis]. This region's peoples, such as the *Arverni* [ar-VER-nee], were led by (*) Vercingetorix [VUR-sin-JEH-tuh-riks] during a war against Julius Caesar. For 10 points— name this ancient region that encompassed most of present-day France.**

answer: Gaul (or Gallia)

<436278>

4. **As a note, this letter of the alphabet is the subdominant in the key of C. The bass ["base"] clef is sometimes named for this letter, which also names the curved holes on a (*) violin. Its major key has one flat. For 10 points— name this letter that, when used as a dynamic, signifies "loud," or *forte* [FOR-tay].**

answer: F (or F clef; or f-hole)

<437603>

5. **The type Ia ["one-A"] class of these events occurs due to carbon fusion in a white dwarf that approaches the Chandrasekhar [CHUN-druh-SHAY-kar] limit. The Crab Nebula was created by one of these events witnessed by (*) Chinese astronomers in AD 1054. For 10 points— name these extremely powerful stellar explosions.**

answer: supernovas (or supernovae; accept type Ia supernova(s); do not accept or prompt on "nova(s)")

<438228>

6. **The seventh version of this software, called "Nougat," was released in 2017. Windows may have been surpassed by this (*) operating system as the most-installed in the world. For 10 points— what mobile operating system developed by Google is named after a word for a human-like robot?**

answer: Android

<428546>

7. **Public outcry erupted during this war over troops being sent "embalmed beef." John Hay, who was secretary of state at its end, called it a "splendid little war." The Battle of (*) San Juan Hill was fought in— for 10 points— what war, in which Theodore Roosevelt's "Rough Riders" fought in Cuba?**

answer: Spanish-American War

<435885>

8. **Pencil and paper ready.** Reina has a circle whose radius is 3, and needs to know how many revolutions will cause a point on the edge to move a total of 90 pi. Since each revolution moves the point a distance equal to the circumference, she finds (*) —for 10 points— what number of revolutions?

answer: 15 revolutions [The circumference is $C = 2 \times \pi \times r = 2 \times \pi \times 3 = 6 \pi$, so moving the point a distance of 90 pi will require $(90 \pi)/(6 \pi) = 45/3 = 15$ revolutions.]

<429865>

9. **The largest islands in this archipelago** [ARK-ih-PEL-uh-goh] **are named Isabela** [ee-sah-BEL-ah] **and Santa Cruz.** **The finches on these islands were studied by a naturalist traveling aboard the (*) HMS *Beagle*** in the 1830s. Ecuador controls—for 10 points— what archipelago in the Pacific Ocean once visited by Charles Darwin?

answer: Galápagos [gah-LAH-puh-gohss] Islands (or Archipiélago de Colón; accept Islas de Colón or Islas Galápagos)

<429848>

10. **One man with this surname was Michigan's governor during the 1967 Detroit riot.** **Another man with this surname claimed that 47% of Americans paid no (*) income tax,** a remark that helped his opponent, Barack Obama. For 10 points—give the surname of 2012 Republican presidential nominee Mitt.

answer: Romney (accept (Willard) Mitt Romney or George (Wilcken) Romney)

<432830>

11. **This author discussed a weekly budget prepared by an "unemployed miner" in his nonfiction book *The Road to Wigan Pier*** [WYE-gun "peer"]. **In another novel by this author, characters are tortured in (*) Room 101** after defying the tyranny of Big Brother. For 10 points—name this author of *Nineteen Eighty-Four*.

answer: George Orwell (or Eric Arthur Blair)

<417400>

12. **In this painting, a man ascending stairs looks back through the doorway into a room that formerly belonged to the deceased prince Baltasar Carlos** [bahl-TAH-sar "carlos"]. **This painting, which depicts a dwarf behind a (*) dog,** centers on the Infanta Margarita. For 10 points—name this painting by Diego Velázquez.

answer: Las Meninas [lahss may-NEE-nahss] (or The Maids of Honor)

<435689>

13. **A "thief" steals one of these vehicles belonging to Antonio Ricci in a film by Vittorio De Sica.** **In his first "readymade," Marcel Duchamp** [mar-SEL doo-SHAHMP] **placed part of one of these vehicles upright on a stool. (*) Schwinn manufactures**—for 10 points— what two-wheeled conveyances used in the Tour de France [toor duh frahnts]?

answer: bicycles or bikes (prompt on "cycle(s)"; accept The Bicycle Thief or Bicycle Thieves or Ladri di biciclette or Bicycle Wheel)

<428711>

14. **In this protocol, responses from the server usually include a "content-type" header.** **This protocol uses the error code (*) 404** to indicate "Not Found." For 10 points—name this protocol used to serve web pages, and whose four-letter abbreviation precedes "colon slash slash" in many URLs [U-R-L'z].

answer: HTTP or Hypertext Transfer Protocol (accept HTTPS or answers that additionally mention "Secure," "Security," "TLS," or "SSL")

<435315>

15. **This country lies west of the Itaipu** [ee-"TIE"-poo] **Dam, whose construction caused an economic boom during the dictatorship of Alfredo Stroessner** ["STRESS"-nur]. **This country won most of the battles in the (*) Chaco** [CHAH-koh] War against its northwestern neighbor, Bolivia. For 10 points—name this country governed from Asunción [ah-soon-SYOHN].

answer: Paraguay (or Republic of Paraguay or República del Paraguay)

<428721>

16. **This author depicted Professor Challenger's visit to a "swamp of the pterodactyls"** [ter-oh-DAK-tilz] **in *The Lost World*.** **A king tries to retrieve a photo from the singer (*) Irene Adler** in this author's story "A Scandal in Bohemia." For 10 points—who created the crime-solving duo of Dr. Watson and Sherlock Holmes?

answer: Arthur (Ignatius) Conan Doyle

<406976>

17. **This "number" is sometimes named after Austrian scientist Johann Loschmidt.** **It equals Faraday's constant divided by the elementary charge and was once defined in terms of (*) 12 grams of carbon-12.** For 10 points—what number of particles in a mole is named after Italian chemist Amedeo [ah-muh-DAY-oh]?

answer: Avogadro(s) [ah-vuh-GAH-droh's] number or Avogadro(s) constant (prompt on "NA"; prompt on answers including "mole")

<430158>

18. **The "motor vehicle exception" is a workaround of this amendment's usual requirement that certain government activity requires (*) probable cause.** The warrant requirement is codified in—for 10 points—what constitutional amendment that protects against unreasonable searches and seizures?

answer: Fourth Amendment (accept Amendment 4)

<435984>

19. **This river feeds the All-American Canal, which was built in the 1930s. This river was dammed at Glen Canyon to create Lake Powell. This river, which irrigates the (*) Imperial Valley, flows into the Gulf of California.** For 10 points—name this river that flows through the Grand Canyon.

answer: Colorado River

<436027>

20. **This entity deflected silver atoms up or down in the Stern-Gerlach [STURN-GAIR-"lock"] experiment. The Biot-Savart [bee-oh-suh-var] law calculates the strength of this (*) field, whose direction around a current-carrying wire is given by the right hand rule.** For 10 points—name this field that can align iron filings.

answer: magnetic field (prompt on "B (field)")

<435898>

21. **In March 2017 this man denied a petition banning chlorpyrifos [clor-"PIE"-rih-fose]. In 2012 he was elected head of the Republican Attorneys General Association, where he launched several lawsuits targeting the (*) Clean Power Plan.** For 10 points—name this head of the Environmental Protection Agency.

answer: (Edward) Scott Pruitt

<432596>

22. **This novel's protagonist shares a hospital room with a man who reads *Maniacs in the Fourth Dimension*, a book by Kilgore Trout. This novel, which begins "all this happened, more or less," depicts the (*) bombing of Dresden.** Billy Pilgrim appears in—for 10 points—what Kurt Vonnegut novel?

answer: Slaughterhouse-Five(, or *The Children's Crusade: A Duty-Dance with Death*)

<417226>

23. **This present-day country contains the site of the Babi Yar [BAH-bee yar] Massacre, where thousands of Jews were killed in 1941. The Orange Revolution ousted Viktor Yanukovich [VEEK-tor yah-noo-KOH-vich] as president of this country. (*) Malaysia Airlines Flight 17 was shot down over—for 10 points—what country whose capital is Kiev [KEE-yev]?**

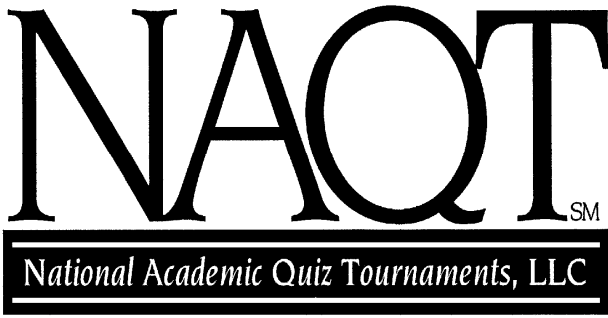
answer: Ukraine (or Ukrayina)

<428158>

24. **Conditions that exhibit this form of inheritance include androgen [ANN-droh-jin] insensitivity syndrome. These conditions, which also include hemophilia [HEE-moh-FEE-lee-uh], are more common in (*) men.** For 10 points—name these genetic diseases with mutant alleles [uh-LEELZ] on the sex chromosome found in both males and females.

answer: X-linked or sex-linked (prompt on "genetic" before "genetic"; accept X-linked recessive)

<435961>



Invitational Series #167A
Packet 1

Bonuses

-
1. A photograph shows a protester opposed to this war placing a carnation into a soldier's rifle. For 10 points each—
- A. Name this war protested by a 1967 march on the Pentagon, along with many campus protests during the 1960s.
answer: Vietnam War (or Vietnam Conflict or War in Vietnam or Chien tranh Viet Nam; accept Second Indochina War)
- B. In 1966 this boxer declared himself a conscientious objector and was sentenced to prison for draft evasion.
answer: Muhammad Ali (or Cassius Marcellus Clay Jr.)
- C. In April 1967 this man denounced the war in his “Beyond Vietnam” speech, which upset many liberal allies. The following year, he began the Poor People's Campaign.
answer: Martin Luther King Jr. (or Michael King Jr.; accept MLK)
- <43494>
2. This city's Lotus Temple is a Bahá'í [buh-“HI”] house of worship that contains 27 marble “petals.” For 10 points each—
- A. Name this city on the Yamuna [yah-MOO-nuh] River. One part of this city was developed by Edwin Lutyens [LUCH-ens] and Herbert Baker during the early 20th century.
answer: (National Capital Territory of) Delhi [DEH-lee] (or Dilli; accept New Delhi)
- B. New Delhi is the capital of this Asian country.
answer: India (or Republic of India or Bharat(iya) Ganarajya)
- C. This most populous city in India is the capital of the state of Maharashtra [MAH-huh-ROSH-truh] and is home to a film industry called Bollywood.
answer: Mumbai [moom-“BYE”] (or Bombay)
- <405087>
3. The title character of this novel is the sister of Prince Stepan [STEH-pahn], who suffers few repercussions for cheating on his wife Dolly. For 10 points each—
- A. Name this novel whose title character throws herself under a train after she is shunned for having an affair with Count Vronsky [VRAHN-skee].
answer: Anna Karenina [AH-nuh kah-REH-nih-nuh]
- B. This Russian author wrote *Anna Karenina*.
answer: Leo Tolstoy [“TOLL”-stoy] (or Lev Nikolayevich Tolstoy)
- C. *Anna Karenina* begins by stating that happy examples of these things are “all alike,” while unhappy ones are each unhappy in their own way.
answer: families (or sem'ya; accept family)
- <438206>

4. This character believed that a cat named Julio [HOO-lee-oh] was the reincarnation of her mother. For 10 points each—
- A. Lisa Kudrow [KOO-droh] played what sitcom character who served as a gestational surrogate for her half-brother, Frank Buffay [buh-FAY] Jr.?
 answer: Phoebe [FEE-bee] Buffay (or Phoebe Buffay-Hannigan; accept either underlined portion)
- B. Phoebe briefly shared a New York City apartment with Monica and Chandler on this NBC series.
 answer: Friends
- C. Phoebe eventually married Mike Hannigan, a character played by this actor who appeared in the *Anchorman* films as reporter Brian Fantana.
 answer: Paul (Stephen) Rudd
- <389013>
5. For a homogeneous [hoh-moh-JEE-nee-us] system, this quantity equals the internal energy plus the product of pressure and volume. For 10 points each—
- A. Name this measurement of a system's energy. It is abbreviated H.
 answer: enthalpy [EN-thul-pee]
- B. The change in enthalpy is positive in this kind of reaction. An example of this kind of reaction is the dissolution of ammonium nitrate [uh-"MOAN"-ee-um NYE-trayt] in water, used in many instant ice packs.
 answer: endothermic [EN-doh-THUR-mik] (do not accept or prompt on "endergonic")
- C. According to this law, the change in enthalpy for a reaction equals the sum of the enthalpy of formation for the products minus the sum of the enthalpy of formation for the reactants.
 answer: Hess's law (of constant heat summation)
- <437819>
6. Members of this ethnic group were targeted in the Anfal [ahn-FALL] genocide. For 10 points each—
- A. Name this ethnic group that was victimized in gas attacks organized by Saddam Hussein's [sah-DAHM hoo-SAYN's] cousin, "Chemical Ali."
 answer: Kurds or Kurdish people or ethnicity
- B. Hussein was the leader of this country defeated by the U.S. in the Persian Gulf War.
 answer: Iraq (or Republic of Iraq or Jumhuriyat al-Iraq)
- C. The Anfal genocide took place in 1987 during Iraq's long war with this country. An Islamic revolution in this country overthrew its leader, the Shah, in 1979.
 answer: Iran [ih-RAHN] (or Islamic Republic of Iran or Jomhuri-ye Eslami-ye Iran)
- <436229>
7. Due to threats from al-Shabaab [ahl-shah-BAHB] that made popular voting too risky, the only voters in this country's 2017 election were legislators selected by elders. For 10 points each—
- A. Name this country in which Mohamed Mohamed was elected over incumbent Hassan Sheikh Mohamud [HAHSS-ahn SHAYK moh-hah-MOOD].
 answer: Somalia (or Jamhuuriyada Demuqraadiga Soomaaliyeed)
- B. Mohamed used to be the prime minister of Somalia but stepped down in 2011 as part of an agreement negotiated in this capital of Uganda [oo-GAHN-dah].
 answer: Kampala
- C. In May 2017 Kyle Milliken, a SEAL from this branch of the U.S. armed forces, was killed while on an advise-and-assist mission in Somalia.
 answer: U.S. Navy (accept Navy SEALs)
- <428251>

8. For 10 points each—answer the following about recipients of the “rising star” award given out by the European basketball league EuroCup Basketball:
- A. The award was won in 2015 by this Latvian-born player, who was drafted that year by the New York Knicks.
answer: Kristaps Porzingis [KRIS-tahps por-ZING-giss]
- B. In 2011 the award went to Donatas Motiejunas [muh-“JUNE”-ess], who currently plays for this team alongside Anthony Davis.
answer: New Orleans Pelicans (accept either underlined portion)
- C. On three occasions the award has gone to a player for this country's Valencia Basket team. Pau Gasol [POW guh-SAUL] was born in this country.
answer: Spain (or Kingdom of Spain or Reino de España)
9. In science, sometimes 'O' comes before 'A'. For 10 points each—
- A. O, B, A, F, G, K, and M are classes along the “main sequence” of these objects, ordered from hottest to coolest.
answer: stars
- B. The O horizon, which contains organic material known as humus [HYOO-muss], lies above the A horizon in this material at the top of the regolith [REH-guh-lith].
answer: soil (accept dirt or earth or topsoil; do not accept or prompt on “regolith” or “clay”)
- C. So far, no element has the atomic symbol A. O is the symbol of this element, which is needed for aerobic respiration.
answer: oxygen
10. A cathedral complex in this city includes an influential octagonal baptistry. For 10 points each—
- A. Name this Italian city, a major center of Renaissance [REN-ih-sahnss] art, whose cathedral is topped by a dome designed by Filippo Brunelleschi [broo-nuh-LESS-kee].
answer: Florence (or Firenze)
- B. Giotto designed a building of this type for the Florence cathedral complex. One of these buildings in Pisa [PEE-suh] is highly tilted.
answer: bell tower (or campanile; prompt on “tower”)
- C. In the competition to design the Duomo [DWOH-moh], Brunelleschi won out over this rival, who in turn won the competition to design the bronze doors of the Florence Baptistery.
answer: Lorenzo Ghiberti [gee-BAYR-tee] (or Lorenzo di Bartolo)
11. This act was passed in 1807 after both England and France violated American neutrality. For 10 points each—
- A. Name this act that stopped the U.S. from participating in overseas trade.
answer: Embargo Act of 1807
- B. The Embargo Act of 1807 was signed by this president, who was succeeded by James Madison.
answer: Thomas Jefferson
- C. The unpopularity of the Embargo Act helped this party gain strength in New England. In 1796 John Adams was elected president on this party's ticket.
answer: Federalist Party (or Federalists)
12. These organisms may be classified as “gram-positive” or “gram-negative,” which roughly corresponds to the thickness of their cell walls. For 10 points each—
- A. Name these microorganisms that include *E. coli* [“E” KOH-“lie”] and *Salmonella* [sal-muh-NEL-uh].
answer: bacteria (or bacterium; prompt on, but do not otherwise reveal “prokaryote(s)”)
- B. Bacteria are this kind of unicellular organism that lacks any membrane-bound organelles [OR-guh-NELZ].
answer: prokaryotes [pro-“CARE”-ee-“oats”]
- C. Prokaryotes are divided into two domains: bacteria and this other domain, whose name implies that the organisms are older than bacteria.
answer: Archaea [ar-KEE-uh] (accept archaeon or Archaeobacteria)

<430185>

<426796>

<428120>

<427938>

<428153>

13. For 10 points each—answer the following about recent setbacks to organized labor in the southeastern U.S.:

A. In an August 2017 vote, workers at a Nissan plant in Mississippi rejected a plan to join this union.

answer: UAW or United Auto Workers

B. In 2014 a vote to join the UAW also failed at a Chattanooga-based Volkswagen factory in this state.

answer: Tennessee

C. Earlier in 2017, the Machinists Union overwhelmingly lost a vote among South Carolina workers employed by this aerospace giant founded in Seattle in 1916. It manufactures planes like the 747.

answer: (The) Boeing [BOH-ing] (Company)

<436760>

14. He served as an adviser to the Whig Earl of Shaftesbury. For 10 points each—

A. Name this 17th-century English philosopher, whose ideas influenced the U.S. Constitution.

answer: John Locke

B. A 1689 publication by Locke is titled “Two Treatises” of this subject. The first such treatise attacked the idea of the divine right of kings.

answer: government (accept Two Treatises of Government or First Treatise of Government)

C. Locke described property as “life, liberty, and estate,” inspiring the phrase “life, liberty, and the pursuit of happiness” in this 1776 document.

answer: (U.S.) Declaration of Independence

<435597>

15. The Cartesian [kar-TEE-zhun] plane can be divided into four quadrants. For 10 points each—

A. How many quadrants does a line go through, if it is neither horizontal nor vertical and does not go through the origin?

answer: three quadrants

B. If the graph of a quadratic function goes through only two quadrants, without touching a boundary between quadrants, what must be true about its discriminant?

answer: negative (or less than zero; do not accept or prompt on “less than or equal to zero” or “non-positive”)

C. In which quadrant is the x -coordinate of every point negative and the y -coordinate positive?

answer: second quadrant (or quadrant II)

<428238>

16. A “diplomatic revolution” prior to this war resulted in an alliance between Britain and Prussia. For 10 points each—

A. Name this mid-18th century conflict, whose North American theater was called the French and Indian War.

answer: Seven Years' War

B. The treaty that ended the Seven Years' War placed most French colonies in North America under the rule of this British king. He reigned during the later American Revolution.

answer: George III of the United Kingdom (prompt on “George”)

C. During the Seven Years' War, this “Great Commoner” held power jointly with the Duke of Newcastle. He became prime minister in 1766.

answer: William Pitt the Elder (or William Pitt, 1st Earl of Chatham; prompt on “Pitt”)

<438238>

17. The name of this literary format is derived from a Greek word meaning “letter.” For 10 points each—

A. Identify this literary format in which a text is presented as a series of letters or other documents.

answer: epistolary [uh-PIH-stuh-lair-ee] (accept answers that include epistolary, such as epistolary novel)

B. Mary Shelley wrote this 19th-century epistolary novel about a doctor who creates a “modern Prometheus”

[proh-MEE-thee-uss].

answer: Frankenstein(; or, The Modern Prometheus)

C. Another 19th-century epistolary novel is *The Tenant of Wildfell Hall*, a work by this youngest of the three Brontë

[BRAHN-tay] sisters.

answer: Anne Brontë (accept Acton Bell; prompt on “(A.) Brontë” or “(A.) Bell”)

<417940>

18. This woman delays her 108 suitors, whose leaders include Antinous [ann-TIN-oh-us] and Eurymachus [you-REE-mah-kus], for upwards of ten years. For 10 points each—

A. Name this daughter of Icarius [ih-KAR-ee-us] and Periboea [PAIR-ih-BEE-uh] who had previously married a grandson of Autolycus [aw-TAHL-uh-kuss].

answer: Penelope [puh-NEH-luh-pee]

B. Penelope waits with her son Telemachus [tel-LEH-mah-kiss] on this island for the return of her husband, its ruler.

answer: Ithaca

C. Eventually, this man returns to Ithaca and proves his identity by shooting an arrow through twelve axe heads at the end of the Homeric epic named for him.

answer: Odysseus [oh-DIH-see-uss] (do not accept or prompt on "(the) Odyssey")

<429155>

19. For 10 points each—answer these questions about the American physicist John Bardeen [ˈbar-DEAN]:

A. In 1956 he shared the Nobel Prize in Physics for inventing what device that amplifies and controls electrical signals? Integrated circuits may contain millions of these replacements for vacuum tubes.

answer: transistors

B. Bardeen is the "B" in the "BCS theory" that explains what phenomenon? In this phenomenon, at very low temperatures certain materials lose all their electrical resistance.

answer: superconductivity (or superconducting or superconductors) [Bardeen shared the 1972 Nobel Prize in Physics with his collaborators, Leon Cooper and John Schrieffer.]

C. For most of his career, Bardeen was a professor at what a university in the cities of Urbana [ur-BAN-uh] and Champaign [sham-PAIN] in this Midwestern U.S. state. This state is also home to Fermilab.

answer: Illinois

<418306>

20. Much of this novel takes place in a house at 124 Bluestone Road. For 10 points each—

A. Name this Pulitzer [PULL-it-ser] Prize-winning novel about Sethe [SETH-uh], who kills her daughter to save her from slavery.

answer: Beloved

B. *Beloved* was written by this author of *The Bluest Eye* and *Song of Solomon*.

answer: Toni Morrison (or Chloe Ardelia Wofford)

C. This Morrison novel takes place in a neighborhood known as "The Bottom," where the title character befriends Nel Wright.

answer: Sula

<436187>

21. For 10 points each—answer the following about King Christian IX [ˈthe ninth] of Denmark:

A. Christian is often referred to as the "father-in-law of Europe"; this British queen who reigned for 63 years is known as the "grandmother of Europe."

answer: Queen Victoria (or Alexandrina Victoria Hanover)

B. One of Christian IX's grandsons was this last Romanov [roh-MAH-noff] tsar [zar] of Russia.

answer: Nicholas II of Russia (or Nikolay II; prompt on "Nicholas" or "Nikolay")

C. In 1874 Christian signed a treaty with this island country allowing it to have its own constitution. This country's first president was Sveinn Björnsson [SVAY-tn PYOOR-son].

answer: Iceland (or Republic of Iceland or Lydveldid Ísland)

<428442>

22. The Trinity River, the longest river wholly within Texas, runs through this city. For 10 points each—

A. Name this city, home to the Perot [peh-ROH] Museum of Nature and Science.

answer: Dallas

B. Dallas is part of a metro area that also includes this city to its west. The largest airport in the area is named for Dallas and this city.

answer: Fort Worth (accept Dallas/Fort Worth International Airport)

C. Among the most visited attractions in Dallas is a museum in the building from which John F. Kennedy was shot; at the time of the shooting, it was this type of building.

answer: book depository (accept Texas School Book Depository; accept answers that refer to a building that stores books; prompt on “warehouse” or “depository”; do not accept or prompt on “library”)

<427734>

23. Pencil and paper ready. Two answers required for all parts. For 10 points each—give *both* values of x that solve these equations:

A. x squared equals x

answer: $x = 0$ and $x = 1$ (accept in either order; do not accept or prompt on partial answers)

B. x squared equals negative 4

answer: $x = 0 + 2i$ and $x = 0 + -2i$ (accept in either order; accept $x = \text{plus or minus } 2i$; do not accept or prompt on partial answers) [$x^2 = -4$, and $x = \text{sqrt}(-4) = \text{sqrt}(4) \times \text{sqrt}(-1) = \pm 2i$]

C. The rational function the quantity x squared plus 9 divided by the quantity $11x$ minus 9 equals 1; you have 10 seconds

answer: $x = 2$ and $x = 9$ (accept in either order; do not accept or prompt on partial answers) [$(x^2 + 9)/(11x - 9) = 1$, so $x^2 + 9 = 11x - 9$, so $x^2 - 11x + 18 = 0$, so $(x - 2)(x - 9) = 0$, and $x = 2$ or $x = 9$]

<427928>

24. For 10 points each—answer the following about winged lions:

A. The winged lion is a symbol representing this evangelist, to whom one of the Four Gospels is attributed.

answer: Saint Mark

B. The Piazza San Marco [pee-AHT-sah sahn MAR-koh] in this Italian city known for its canals is home to a statue of a winged lion.

answer: Venice (or Venezia)

C. The lamassu [lah-MA-soo] is a large winged lion or bull depicted in statues from this ancient empire ruled by Sennacherib [suh-NAK-uh-rib].

answer: Assyrian [uh-SEER-ee-un] Empire (accept Neo-Assyrian Empire or Neo-Assyria)

<436871>