1. What state, where Denmark Vesey [VEE-zee] planned a slave rebellion, was the first to secede from the U.S. and is home to Fort Sumter in Charleston harbor?
answer: South Carolina

1. Pencil and paper ready. What is the discriminant of the quadratic polynomial \([pah-lih-NOH-mee-ul] 2x squared plus x minus 7\), given the formula is \(b squared minus 4ac\)?
answer: \(57\) \([D = b^2 - 4ac = 1^2 - (4 \times 2 \times -7) = 1 - (8 - 7) = 1 - (-56) = 57]

2. What five-letter word for an Icelandic letter representing the “th” [T-H] sound follows “haw” in the name of a shrub and can refer to the spines found on roses?
answer: thorn(s) (accept hawthorn after “haw”)

2. Mercredi [MAIR-creh-dee], which refers to the Roman god Mercury, is the French word for what day of the week?
answer: Wednesday

3. What quantity’s “elementary” value was measured in the Millikan [MIH-lih-kun] oil-drop experiment, can be expressed in coulombs [KOO-lohms], and for electrons is negative?
answer: electric charge

answer: NAACP ["N double A-C-P"] (or National Association for the Advancement of Colored People; accept NAACP Legal Defense Fund)

answer: (Saint) Pope John Paul II (or Karol Józef Wojtyła; prompt on “John Paul”; do not accept or prompt on “John” or “Paul”)

4. The Bhagavad Gita [BAH-guhd-VAHD GEE-ruh] is a Hindu scripture which originally appeared as a monologue within what larger, narrative epic poem?
answer: Mahabharata [muh-huh-BAH-ruh-ruh]

5. What art movement’s painters included Marie Bracquemond [brahk-MAHND], Berthe Morisot [bairt moh-ree-ZOH], and Mary Cassatt [kuh-SAT], as well as the painter of Water Lilies, Claude Monet [moh-NAY]?
answer: impressionism (or l’impressionnisme; accept impressionists or impressionist movement)

5. The Delmarva Peninsula forms the eastern border of what inlet of the Atlantic Ocean, which is fed by the Susquehanna [suh-skwhuh-HAH-ruh] and Potomac [puh-TOH-muk] Rivers?
answer: Chesapeake Bay
6. What character, who was named for Nintendo’s lawyer, is a native of Planet Popstar who often fights King Dedede [dee-dee-dee] and is able to inhale his enemies?
answer: Kirby

6. “Saturnism” refers to poisoning by what heavy metal, whose Latin name is the origin of an English word reflecting its former use in water pipes?
answer: lead (or Pb) [The Latin term for lead, plumbum, is the source of the English word “plumbing.”]

7. What organelle [OR-guh-NEL] in which RuBisCo [roo-BISS-koh] catalyzes carbon fixation as part of the Calvin cycle, contains thylakoids [’THIGH-luh-koyds] and carries out photosynthesis in plants?
answer: chloroplast(s) [KLOR-uh-plast]

7. What cryptocurrency based on an internet meme lost nearly 30 percent of its value in the hours after Elon Musk referred to it on Saturday Night Live?
answer: Dogecoin [dohzh-’coin’]

8. In what year was the Schlieffen [SHLEEF-un] Plan activated after Germany declared war on France, after the murder of Archduke Franz Ferdinand began World War I?
answer: 1914

8. Which man, who commanded British forces at the Battle of the Nile, died aboard the HMS Victory during a battle in 1805?
answer: (Lord) Horatio Nelson [Nel-son; 1st Viscount Nelson]

9. Vinson Massif [VIN-son mah-SEEF] is on what continent that has the highest average elevation, is surrounded by the Southern Ocean, and has the coldest climate?
answer: Antarctica

9. The Tsugaru [soo-gar-oo] Strait separates Honshu from what northernmost of the Japanese main islands, whose capital is Sapporo?
answer: Hokkaido [hoh-kye-doh]

10. What force, whose study is called tribology [’try-BAH-juh-jee], has a magnitude of at most a coefficient μ [’mew’] times the normal force, and slows down a sliding object?
answer: (kinetic) friction(al force) (accept coefficient of (kinetic) friction; accept (coefficient of) static friction(al force) before “sliding“)

10. The opening line of To Kill a Mockingbird refers to the broken arm suffered by what character in his altercation with Bob Ewell [YO0-uhl]?
answer: Jem Finch (or Jeremy Finch; prompt on “Finch“)

11. What city was home to Tempelhof airport, which was used to receive goods during a 1940s Soviet blockade, and was divided by a wall from 1961 to 1989?
answer: Berlin (or West Berlin)

11. Henry V [’the fift’] led English forces at what battle of the Hundred Years’ War, which occurred on St. Crispin’s Day in 1415?
answer: Battle of Agincourt [AH-zhin-koor]

12. What character meets Tom o’ Bedlam on a heath, has daughters named Regan, Goneril, and Cordelia, and is the title king of a Shakespeare tragedy?
answer: King Lear
12. What principle states that a system in equilibrium will shift to counteract certain changes, such as changes in pressure or volume?
   answer: Le Châtelier’s [luh shah-lee-AY’z or luh shaat-lee-AY’z] principle

13. What decade, in which Mr. T starred on NBC’s action series The A-Team, is the setting of contemporary shows such as The Goldbergs and Stranger Things?
   answer: 1980s

13. What mustachioed [muss-TASH-ee-ode’] Belgian detective uses the “little grey cells” of his brain to solve murders in novels by Agatha Christie?
   answer: Hercule Poirot [‘air’-KYOOOL pwaah-ROH] (accept either underlined portion)

14. Pencil and paper ready. How many seconds does it take to wash one dish, if 15 dishes can be washed in 3 minutes?
   answer: 12 seconds \([(3 \text{ minutes}) / (15 \text{ dishes}) \times (60 \text{ seconds/minute}) = 3 \times 4 = 12 \text{ seconds/dish}]\)

14. What modernist painter—who was born near the town of Vitebsk [vuh-TEPSK] in present-day Belarus [BEH-luh-ROOS]—showed a green human facing a goat in I and the Village?
   answer: Marc (Zakharovich) Chagall [shuh-GAHL] (or Moishe Chagall)

15. Which king, who may have ordered the deaths of the “Princes in the Tower,” was succeeded by Henry VII [‘the seventh’] after he was defeated at the Battle of Bosworth?
   answer: Richard III [‘the third’] of England (prompt on “Richard”)

15. Which Germanic people were ruled for over 50 years by king Gaiseric [‘guy’-SAIR-ik], who captured Roman Carthage in AD 439 and sacked Rome in 455?
   answer: Vandals

16. What playwright created the fathers Eddie Carbone [kar-BOH-nee] in A View from the Bridge, Joe Keller in All My Sons, and Willy Loman in Death of a Salesman?
   answer: Arthur (Asher) Miller

16. What country’s scandal involving 26,000 parents falsely accused of childcare benefit fraud led to the 2021 resignation of Prime Minister Mark Rutte [RUH-tuh]?
   answer: The Netherlands (or Kingdom of the Netherlands or Koninkrijk der Nederlanden; accept Holland)

17. What composer of The Thunderer, Fairest of the Fair, and Semper Fidelis was nicknamed the “March King,” and also composed The Stars and Stripes Forever?
   answer: John Philip Sousa

17. What gas with tetrahedral [TET-ruh-HEE-drul] molecular geometry is the lightest alkane [‘AL-cane’]?
   answer: methane (or CH₄)

18. What condition, whose “fixation” type is a symptom of Korsakoff syndrome, has “anterograde” and “retrograde” types and involves deficits in memory?
   answer: amnesia

18. What name, from an Iroquois [EER-oh-kwoy] word for “settlement” or “village,” did Jacques Cartier [zhahk kart-YAY] give the territory along the St. Lawrence River he claimed for France?
   answer: Canada (accept The Country of Canadas)

19. What ruler replaced the han system with prefectures in 1871, a few years after he took power as emperor of Japan in his namesake “restoration?”
   answer: Meiji [MAY-jee or may-ee-jee] (or Meiji the Great or Meiji-tenno or Meiji-taitei or Mutsuhito; accept Meiji Restoration)
19. Although *Let It Be* was released later, what 1969 album containing “Something” and “Come Together” was the last studio album recorded by the Beatles?
answer: Abbey Road

20. What object, whose debris causes the Orionid [or-EYE-uh-nid] meteor shower, was observed by its namesake in 1682, will pass near Earth in 2061, and is a comet?
answer: Halley’s Comet (or 1P/Halley)

20. What country, whose capital lies at the confluence of the Logone [lo-GOH-nay] and Chari [SHAR-ee] rivers, is governed from N’Djamena [en-juh-MAY-nah] and names a large African lake?
answer: Chad (or Republic of Chad or République du Tchad or Jumhuriyat Tshad; accept Lake Chad)

21. What author of “Vengeful Creditor” wrote about an Igbo [EE-boh] man who hangs himself during the British colonial rule of Nigeria in his novel *Things Fall Apart*?
answer: Chinua Achebe [CHIN-wah ah-CHAY-bay] (or Albert Chinualumogu Achebe)

21. Which property of equality states that a equals a, or, in other words, that a number always equals itself?
answer: reflexive property of equality or reflexivity of equality

22. What daughter of Zeus, celebrated with her mother in the Eleusinian [el-yoo-SIN-ee-un] mysteries, ate pomegranate seeds that obliged her to leave each year for Hades?
answer: Persephone [pur-SEH-fuh-nee]

22. What prize that was shared in 2019 by the books *Girl, Woman, Other* and *The Testaments* is awarded to English-language novels published in the U.K.?
answer: Booker Prize for Fiction (or Man Booker Prize) [Bernardine Evaristo wrote *Girl, Woman, Other* and Margaret Atwood wrote *The Testaments.*]

23. What layer of the atmosphere from which Joseph Kittinger made a 20–mile-high skydive in 1960 lies above the troposphere [TROH-poh-“sphere”] and contains the ozone layer?
answer: stratosphere [STRAT-oh-“sphere”]

23. Hong Xiuquan, who claimed to be the brother of Jesus, led which rebellion against the Qing dynasty?
answer: Taiping [tie-ping] Rebellion (or Tai Ping Tien Kuo or Taiping Heavenly Kingdom; accept Taiping Uprising or Taiping Civil War or similar answers that include “Taiping”)

24. What 11–letter adjective describes a kinship system in which descent is traced through a line of female ancestors?
answer: matrilineal (do not accept or prompt on “matriarchal”)

25. What radioactive element, which has been used as a poison, was named by Marie Curie after her homeland?
answer: polonium [puh-LOH-nee-un] (or Po)

26. What man, who skipped the Constitutional Convention because he “smelled a rat,” gave a 1775 speech in Virginia stating “Give me liberty or give me death”?
answer: Patrick Henry
26. What noun that refers to a section of a long poem comes from the Italian word for “song,” and was used in the title of a 116-part poem by Ezra Pound?
answer: cantos (KAHN-toh) (accept The Cantos)

27. Actin [AK-tin] and myosin ["MY-uh-sin"] are found in what structures with cardiac and smooth forms plus those connected to bones by tendons that contract to cause movement?
answer: muscles

27. What Norse god, who sacrificed a hand during the chaining of the wolf Fenrir [FEN-ree], will kill and be killed by the hellhound Garm at Ragnarök [RAG-nuh-rock]?
answer: Tyr (or Tiw [too])

28. What politician, who displayed a poster depicting “111 days of hell” and a mountain during the COVID crisis, resigned as the governor of New York?
answer: Andrew (Mark) Cuomo

28. Electrical stimulation of the tongue may help alleviate what common condition in which a person hears “ringing in the ears”?
answer: tinnitus [tih-NYE-tus or TIN-uh-tuss]

29. What river, whose headwaters originate in Lake Itasca ["eye"-TASS-kuh], flows through such cities as Memphis and St. Louis before emptying in the Gulf of Mexico?
answer: Mississippi River

29. In 2020 the National Science Foundation announced the decommissioning of the Arecibo Observatory radio telescope in which U.S. territory?
answer: Puerto Rico [PAIR-toh REE-koh] (or Commonwealth of Puerto Rico or Estado Libre Asociado de Puerto Rico)

30. What leader of the Division del Norte [dee-vee-see-OHN del NOR-tay] raided Columbus, New Mexico, prompting John “Black Jack” Pershing to unsuccessfully pursue him into Mexico?
answer: Pancho Villa [PAHN-choh VEE-yah] (or Francisco Villa or José Doroteo Arango Arámbula [dor-oh-TAY-oh ah-RAHM-goh ah-RAHM-boo-lah])

30. What term for an actor comes from a 6th-century BC Greek, who, according to Aristotle ["AIR-ih-stah-tul"], was the first recorded stage actor who portrayed a character?
answer: thespians [from Thespis of Icaria]

31. What 1969 book, whose title character eats five oranges on a Friday, was written by Eric Carle ["carl"] about a ravenous [RAV-uh-nuss] creature that becomes a butterfly?
answer: The Very Hungry Caterpillar

31. What identical—or “sister” — copies of a chromosome ["CROW-muh-sohm] are attached by a centromere [SEN-truh-meer] before being separated in mitosis ["my-TOH-sis"]?
answer: (sister) chromatids ["CROW-muh-tids]

32. What property, which the Greek mathematician Hippasus [hip-PASS-us] showed the square root of 2 has, means a number cannot be written as a fraction of integers?
answer: irrationality (or being irrational; accept irrational numbers or the irrationals)

32. What quarterback threw 60 touchdowns for LSU ["L-S-U"] during the 2019 season and was taken with the first pick in the 2020 NFL draft?
answer: Joe Burrow (or Joseph Lee Burrow)
33. What country’s San Isidro [sahn ee-SHEE-dro] Movement has joined in protests against Miguel Diaz-Canel [meeg-EL DEE-ahz kah-“NAIL”], who in 2021 assumed power as first secretary from Raúl Castro [rah-OOL KAH-stroh]?
answer: Cuba (or Republic of Cuba or República de Cuba)

33. In 1639 what English colony adopted the Fundamental Orders, a governing document that led to the future state’s nickname, “the Constitution State?”
answer: Connecticut

34. What author, who wrote about a strike led by fruit pickers in his novel In Dubious Battle, also wrote the novels Tortilla Flat and Cannery Row?
answer: John Steinbeck (or John Ernst Steinbeck Jr.)

34. Pencil and paper ready. How many inches are equivalent to 3.5 [“three point five”] yards?
answer: 126 inches [(3.5 yards) × (3 feet/yard) × (12 inches/foot) = 3.5 × 36 = (3 × 36) + (0.5 × 36) = 108 + 18 = 126 inches]

35. What material, discovered accidentally by Roy Plunkett, contains repeating CF₂ [“C-F two”] units and is a polymer commonly found in non-stick cookware?
answer: Teflon (or polytetrafluoroethylene or polytetrafluoroethene; accept PTFE)

35. This Side of Paradise and The Beautiful and Damned are early novels by what writer from the “Lost Generation”?
answer: F. Scott Fitzgerald (or Francis Scott Key Fitzgerald)

36. What director cast Richard Dreyfuss in the UFO film Close Encounters of the Third Kind and made a 1975 film about shark attacks called Jaws?
answer: Steven (Allan) Spielberg

36. “Gambrel” [GAM-brul], “mansard” [MAN-surd], and “gable” are all types of what part of a building that may contain elements called ridges and eaves?
answer: roof(s) (do not accept or prompt on “ceiling(s”)’)

37. What country was once home to the region of Helvetia [hel-VEE-shuh], is divided into cantons [KAAN-tahnz] such as Jura [JOO-rah] and Bern [bairn], and is home to the cities of Zurich and Geneva?
answer: Switzerland (or Swiss Confederation or Schweiz or Schweizerische Eidgenossenschaft or Confederation Suisse or Confederazione Svizzera or Confederaziun Svizra)

37. What journalist wrote the 2021 book Securing Democracy about his role in Operation Car Wash, co-founded The Intercept, and worked with Edward Snowden?
answer: Glenn (Edward) Greenwald

38. What German philosopher, whose Groundwork of the Metaphysics of Morals discusses the categorical imperative, wrote the Critique of Pure Reason?
answer: Immanuel Kant

38. Louis de Broglie [duh BROH-lee] posited that matter behaves like what periodic disturbances, with a namesake “length” equal to Planck’s constant over the momentum?
answer: waves (accept de Broglie or matter waves; prompt on “(de Broglie) wavelength”)”

39. Pencil and paper ready. What is the value of three-tenths divided by two-fifths, given it is equivalent to three-tenths multiplied by five-halves?
answer: 3/4 or 0.75 [(3/10)/(2/5) = (3/10) × (5/2) = (3/2) × (1/2) = 3/4]
39. What war, in which the British give smallpox blankets to Native Americans, included the siege of Fort Detroit, and was named for an Ottawa chief?
answer: **Pontiac’s War** (accept Pontiac’s Rebellion or Pontiac’s Uprising; accept Obwandiyag in place of “Pontiac”)
[The British gave the smallpox blankets to the Native Americans during the siege of Fort Pitt]

40. In 1676 what colony’s governor William Berkeley fought a mixed-race rebellion led by Nathaniel Bacon that led to the burning of Jamestown?
answer: **Virginia** (or Commonwealth of Virginia)

40. What title character of an Edmond Rostand play prides himself on his panache, has a large nose, and writes love letters to help Christian woo Roxane?
answer: **Cyrano de Bergerac** (SEER-uh duh BAIR-zhuh-rak) (or Hercule-Savinien de Cyrano de Bergerac; accept any underlined portion) [The play is *Cyrano de Bergerac*.]
1. Literary terms. Give these terms related to plots, characters, and other elements of narrative literature.
   □ □ A. A story’s time and place
       answer: setting(s)
   □ □ B. An out-of-order scene set before the main storyline
       answer: flashback(s)
   □ □ C. A character whose traits starkly contrast with another
       answer: foil(s)
   □ □ D. Presenting hints about future action
       answer: foreshadowing (accept answers indicating an author foreshadows)
   □ □ E. A conversation between two or more characters
       answer: dialogue(s)
   □ □ F. A protagonist who lacks conventional heroic qualities
       answer: antihero(es)
   □ □ G. Background info, or the very beginning of a story
       answer: exposition(s) or expository information
   □ □ H. Extreme pride that may serve as a tragic flaw
       answer: hubris [HYOO-briss]
   □ □ I. A work directly mocking or lampooning other works or genres
       answer: parody (or parodies; prompt on “satire(s)” [Satire does not lampoon the work itself.])
   □ □ J. A story’s resolution, from the French for “un-knotting”
       answer: dénouement [day-noo-MAWN]
2. Teams not ending in ‘S’. Name these pro sports teams whose nicknames do not end in an ‘S’.
□ □ A. Massachusetts MLB team that plays in Fenway Park
answer: Boston Red Sox (accept either underlined portion; prompt on “Sox”)
□ □ B. South Florida team that lost in the 2020 NBA Finals
answer: Miami Heat (accept either underlined portion)
□ □ C. Pacific Northwest NHL team debuting in 2021
answer: Seattle Kraken (accept either underlined portion)
□ □ D. NBA team that relocated to the “Sooner State” in 2008
answer: Oklahoma City Thunder (accept either underlined portion; prompt on “OKC”)
□ □ E. NHL team that shares an arena with the Denver Nuggets
answer: Colorado Avalanche (accept either underlined portion)
□ □ F. NBA team starring Rudy Gobert [goh-'BEAR] and Donovan Mitchell
answer: Utah Jazz (accept either underlined portion)
□ □ G. MLB team that “threw” the 1919 World Series
answer: Chicago White Sox (prompt on “Chicago” or “Sox”)
□ □ H. NHL team that won the 2020 and 2021 Stanley Cup Finals
answer: Tampa Bay Lightning (accept either underlined portion; accept Tampa)
□ □ I. NBA team that drafted Shaquille [shah-KEEL] O’Neal
answer: Orlando Magic
□ □ J. NHL team that plays at Xcel Energy Center in St. Paul
answer: Minnesota Wild (accept either underlined portion)

3. Double-‘O’. Give these words that either begin or end with two ‘O’s:
□ □ A. Synonym for “a lot”
answer: oodles
□ □ B. An act that is culturally forbidden
answer: taboo
□ □ C. To slowly flow out, or a substance that does so
answer: ooze (accept oozing or oozes)
□ □ D. Fast-growing plant eaten by pandas
answer: bamboo
□ □ E. Semi-arid region of southern Africa
answer: Karoo
□ □ F. Type of tea whose name means “black dragon”
answer: oolong
□ □ G. Droning instrument played by the Aboriginal people of Australia
answer: didgeridoo [DID-juh-ree-DOO]
□ □ H. The study of birds’ eggs
answer: oology [oh-AH-luh-jee]
□ □ I. To praise extravagantly, or the act of doing so
answer: ballyhoo
□ □ J. Vocalization of sports fans who disagree with a call
answer: boo
4. S-H [‘S’ ‘H’]. Give these words that begin with the letters ‘S’ and ‘H’:

□ □ A. To harvest a sheep’s wool
   answer: shear (accept answers indicating wool is sheared)

□ □ B. Computer key held down to capitalize a letter
   answer: shift key

□ □ C. A style of long-fiber carpet popular in the 1970s
   answer: shag (carpet)

□ □ D. A type of solid, oily cooking fat
   answer: shortening

□ □ E. Fetters that bind a prisoner’s ankles
   answer: shackles

□ □ F. Deadly debris from a bomb
   answer: shrapnel (accept shards)

□ □ G. A non-stop bus or train service that mainly serves only two locations
   answer: shuttle (service)

□ □ H. Tibetan ethnic group whose members are renowned for mountaineering
   answer: Sherpa(s)

□ □ I. A victory in which the opponent’s score is zero
   answer: shut-out

□ □ J. To destroy something by rending it into tatters
   answer: shred (or shredding or shredded)