

Tossups

- In this war, Fort Duquesne was targeted by the Braddock expedition, which ended at the Battle of the Monongahela. Jeffrey Amherst defended Fort Ticonderoga in this war; as a result, his troops could not attend a battle that saw opposing generals Montcalm and (*) Wolfe both die on the Plains of Abraham. The Battle of Quebec was a turning point in, for 10 points, what sub-war of the Seven Years' War, named for the two opponents of British forces?**
 Answer: **French and Indian** War (prompt on Seven Years' War before mentioned)
- Works by this author concern the love of Richard and Muriel and one about the prostitute daughter of Chris Christopherson. In another of his plays, Edmund has tuberculosis and Mary fails to hide a morphine addiction. (*) *Ah, Wilderness!* and *Anna Christie* are by this man, who wrote about Theodore Hickman visiting Harry Hope's bar after killing his wife. For 10 points, name this American playwright of *Long Day's Journey into Night* and *The Iceman Cometh*.**
 Answer: Eugene (Gladstone) **O'Neill**
- The uniting of one couple in this opera leads to stuttering in the duet "Pa, pa, pa." In this opera's aria "O zittre nicht," Pamina is pledged to be wed to one character if she can be saved from Sarastro, while another aria, "Der Hölle Rache," contains four (*) high F notes. Those arias are both sung by the Queen of the Night. For 10 points, name this Mozart opera in which Tamino is given the title musical instrument.**
 Answer: The **Magic Flute** (accept Die **Zauberflöte**)
- In 2008, he told Stephen Colbert "you terrible role model!" before eating his Peabody Award. He sings "Me start to really freak out/Please someone call the Girl Scout" in a 2012 Carly Rae Jepsen parody, and this singer of (*) "Share It Maybe" can only think of one word that starts with the letter "C" -- his favorite food, which is now only a "sometime snack." For 10 points, name this blue *Sesame Street* character with an insatiable sweet tooth.**
 Answer: **Cookie Monster**
- This man is advised by a resident of the Island of Aiaia, who warns this man about the sacred livestock on the island of Helios. This man sails between a six-headed monster and a whirlpool, (*) Scylla and Charybdis, and is imprisoned by Calypso while returning to Ithaca from the Trojan War. He finally reunites with his son, Telemachus, and his wife, Penelope, after a twenty-year journey. For 10 points, name this subject of an epic poem by Homer.**
 Answer: **Odysseus**
- The *HMS Flirt* was sunk in this body of water, which was also the site of Lord Mountbatten's failed Dieppe Raid. Crossing this body of water was the goal of the Duke of Medina Sidonia, who instead lost at Gravelines. Operation (*) Sealion, which was thwarted by the Royal Air Force, was a Nazi attempt to cross it. Calais, France lies across from Dover at the narrowest point of, for 10 points, what waterway that defends Great Britain from the armies of continental Europe?**
 Answer: **English Channel** (accept **Strait of Dover** or **Dover Strait** before "Dieppe," but it's wrong after; prompt on "Channel")

7. **The Biot-Savart law calculates a magnetic field induced by this quantity, of which sums in and out of nodes are equal according to Kirchhoff's junction rule. Inductance measures a material's opposition to changes in this quantity, and (*) power equals voltage times it. This equals voltage divided by resistance, and conventionally is measured in the direction of positive charge. For 10 points, name this quantity measured in amperes.**
 Answer: electric current
8. **Muhammad II of Khwarezmia had a messenger sent by this man beheaded. Merkits kidnapped this man's wife Börte, and he employed the general Subotai. After this man's death, his son Tolui served as regent until the succession of (*) Ögedei. This man's birth name was Temujin, and his descendants include Jochi, Chagatai, and Kublai. For 10 points, name this conqueror, the first Khan of the Mongol empire.**
 Answer: Genghis Khan (accept Chinggis Khan; accept Yuan Taizu; accept Borjigin Temujin before mentioned)
9. **In Sumerian mythology, Ea warned Utnapishtim [oot-nah-peesh-teem] about this event. Pyrrha [pee-rah] reached Mount Parnassus during this event with her husband, Deucalion [doo-kay-lee-ahn], after Zeus punished the world for its lack of piety. Another story about this event sees (*) Shem, Ham, and Japheth survive this event in a ship containing seven pairs of every clean animal. Noah built an ark to survive, for 10 points, this legendary event in which the world became covered in water.**
 Answer: great flood (accept great deluge; accept flood myths or deluge myths; accept flood narratives or deluge narratives)
10. **Low phosphorus or iron causes the proteoid type of this structure, which forms clusters. The radicle is the embryonic form of this structure, and this structure's caps contain the growing tips. One type of this structure is the (*) "tap" variety, and nitrogen fixation occurs in its nodules. Edible types of this structure include beets and carrots. For 10 points, name this structure that takes in water and nutrients and keeps plants fixed to the ground.**
 Answer: roots
- Half Time
11. **After this man loses a case to a group including Anytus and Lycon, this man ironically suggests he be given free meals in the Prytaneum. He notes that the unexamined life is not worth living and is accused of atheism by Meletus. This man's trial and conviction for (*) corrupting the youth of Athens are described in the *Apology* by Plato. For 10 points, name this Ancient Greek philosopher who was sentenced to death by drinking hemlock.**
 Answer: Socrates
12. **This author's poems read, "They're changing the guard at Buckingham Palace" and, "Halfway down the stairs is a stair where I sit. There isn't any other stair quite like it." Tales by this author see a group of friends go on an "expedition" to the North Pole and fall into a trap set for a (*) "heffalump;" those tales are illustrated by E.H. Shephard. For 10 points, name this author who entertained his son, Christopher Robin, with stories of Winnie-the-Pooh.**
 Answer: A(Ian) A(lexander) Milne

13. **People who experienced this event were sometimes allowed to reach the Sekhet Aaru [seh-keht ah-roo], or “field of reeds.” During this event, the “opening of the mouth” symbolically allowed a person to eat and see. In this ritual, organs became protected by (*) canopic jars before the dried corpse was wrapped in linen according to rituals in the Book of the Dead. For 10 points, name this process that preserved and prepared dead Egyptians for the afterlife.**
 Answer: ritual mummification (accept word forms; accept ritual embalming; accept any other answer that refers to ancient Egyptians preserving their dead for burial before “preserved” is read; accept the weighing of the heart or weighing of the soul before “opening of the mouth” is read; prompt on “death” or “dying” before “opening of the mouth” is read)
14. **During one of these phenomena, low-level shear aligned by updrafts is penetrated by cold air from the downdraft, creating “hook echo” patterns on Doppler radar. In fair weather, one of these phenomena occurring over a body of water is called a (*) waterspout. The Enhanced Fujita scale rates the damage of, for 10 points, what rotating columns of air formed when funnel clouds reach the ground?**
 Answer: tornadoes (prompt on funnel cloud before mentioned; prompt on waterspout, twister, or cyclone)
15. **In one story by this author, a group of travelers fleeing from Rouen persuade the title prostitute to help them escape after they are stopped by Prussian soldiers, but shun her when she does. In another story by this author, the loss of Jeanne Forestier’s (*) jewelry causes Mathilde Loisel to incur a massive debt because she does not know the jewelry is fake. For 10 points, name this French author of “Ball of Fat” and “The Necklace.”**
 Answer: (Henri René Albert) Guy de Maupassant
16. **This event took place in spite of George Cortelyou's request for extra security at the Temple of Music. An X-ray machine was available, but it was not used to find the fatal bullet, fired by a revolver concealed in an anarchist's handkerchief. This event occurred at the (*) Pan-American Exposition in Buffalo, New York, and it led to Theodore Roosevelt becoming President. For 10 points, name this event in which Leon Czolgosz killed the 25th U.S. President.**
 Answer: Assassination of William McKinley (both underlined portions required; accept equivalents; prompt on partial answers)
17. **In set theory, Georg [GAY-awrk] Cantor used “aleph null” to denote a set with this cardinality, which he called “countable.” This is the length of a Turing machine’s tape, and Euclid proved that there are this many (*) prime numbers. In calculus, the limit of 1 over x, as x approaches zero from the right, takes this value. For 10 points, name this quantity that describes values that are greater than any real number.**
 Answer: infinity (accept word forms; accept countably infinite or countable before “countable”)
18. **In one work by this artist a bowl of fruit sits by a window behind a woman in a green coat who stares into her coffee. In another of this artist's works, a cash register can be seen in an empty store in the background. This artist of (*) *Automat* created a painting that includes an advertisement for five cent Phillies above two men and a woman in a red dress sitting at a diner counter. For 10 points, name this artist of *Nighthawks*.**
 Answer: Edward Hopper

19. **A lawsuit claims that Morgan Stanley's failure to disclose revenue estimates prior to this event cost investors \$2.5 billion. A "hack-a-thon" took place the night before this event, which was delayed by 30 minutes by technical glitches, leading to lawsuits against (*)** NASDAQ. A \$38 price was quoted at, for 10 points, what May 2012 event in which shares of Mark Zuckerberg's social networking site were first sold to the public?
Answer: Initial Public Offering of Facebook, Inc. (all underlined portions required; accept IPO of Facebook.com; prompt on IPO; prompt on equivalents for IPO such as "Facebook going public")
20. **Orthoclase is a type of feldspar that contains this element, whose isotope-40 is used with argon to date rock formations. This element's chloride is used in executions, and nitrates of it are found in saltpeter and fertilizer. This element emits a (*) lilac color in a flame test, and a water-soluble form of this element is found in potash. For 10 points, name this alkali element, slightly less reactive to air and water than sodium, whose chemical symbol is K.**
Answer: Potassium (accept K before mentioned)

Bonuses

1. For 10 points each, give the following about fruit in art.

[10] Magritte [mah-GREET] used a green one of these fruits to cover the face of his *Son of Man*.
Dürer [DOO-rur] depicted Eve handing Adam a fruit of this type.
Answer: **apples**

[10] A bowl overflowing with fruit sits on a table in the foreground of this French Impressionist's *Luncheon of the Boating Party*. He also depicted a woman in a white dress standing on *The Swing*.
Answer: Pierre-Auguste **Renoir**

[10] Fruit spills out of a basket in this Édouard Manet painting, in which a nude woman consumes the title meal with a pair of clothed men.
Answer: **Luncheon on the Grass** (accept Le **déjeuner sur l'herbe**)
2. This work's protagonist has an apple lodged in his back and learns that his transformation has spoiled his taste for milk. For 10 points each,

[10] Name this novella in which Gregor Samsa has been mysteriously turned into a giant insect.
Answer: The **Metamorphosis** (accept Die **Verwandlung**)

[10] This German author of the short story "A Hunger Artist" also wrote *The Metamorphosis*.
Answer: Franz **Kafka**

[10] In this Kafka novel featuring the parable "Before the Law," Josef K. is arrested for an unknown crime.
Answer: The **Trial** (accept Der **Prozess**)
3. This mathematical entity is often metaphorically described as a "machine" where each input returns a unique output. For 10 points each,

[10] Name this entity, the graph of which must pass the vertical line test.
Answer: **functions**

[10] This type of function possesses a graph that is symmetric with respect to the y-axis. Examples include $y=x^2$ ["y equals x squared"] and $y=\cos(x)$ ["y equals the cosine of x"].
Answer: **even** functions

[10] This type of function passes the horizontal line test, meaning that output values are never repeated.
Answer: **one-to-one** function(s) (accept **injective** function(s); accept **injection**(s))
4. The country of Andorra is found in this mountain range. For 10 points each,

[10] Name this mountain range that separates the Iberian Peninsula from the rest of Europe.
Answer: **Pyrenees** Mountains

[10] The Pyrenees separate Spain from this country, whose cities include Toulouse, Lyon, and Paris.
Answer: **France**

[10] The western end of the Pyrenees is this gulf of the Atlantic Ocean north of Spain and west of France. The Loire River flows into this body of water.
Answer: Bay of **Biscay** (accept Golfe de **Gascogne**; accept Golfo de **Vizcaya**)

5. In the *Aeneid*, a bough of this material is used to travel into and out of the underworld. For 10 points each,
[10] Zeus visited Danae as a shower of this precious metal.
Answer: **gold**
[10] This mythical object was kept in Colchis. King Pelias ordered Jason and the Argonauts to acquire this golden substance.
Answer: golden **fleece**
[10] This Phrygian king was cursed with the ears of a donkey, and accidentally turned his daughter into gold.
Answer: King **Midas**
6. For 10 points each, give the following about methane.
[10] According to VSEPR theory, this is the molecular geometry of a molecule of methane, whose central atom features four covalent bonds.
Answer: **Tetrahedral**
[10] This is the ideal bond angle (rounded to the nearest tenth) of a tetrahedral molecule like methane.
Answer: **109.5** degrees
[10] Methane reacts with this series of elements if initiated by free radicals. This series of elements includes fluorine, chlorine, iodine, and bromine.
Answer: **halogen**
7. He resolves to “work harder,” and later believes fervently that “Napoleon is always right.” For 10 points each,
[10] Name this draft horse, who is sent to a glue factory after being wounded defending a windmill against the human allies of Mr. Jones.
Answer: **Boxer**
[10] Boxer appears in this novel, in which pigs named Napoleon and Snowball teach sheep to bleat “four legs good, two legs bad,” though they are later retrained to say “four legs good, two legs better.”
Answer: **Animal Farm**
[10] *Animal Farm* was written by this English author of *Burmese Days* and the dystopian novel *Nineteen Eighty-Four*.
Answer: George **Orwell** (accept Eric Arthur **Blair**)
8. This act, along with the Geary Act renewing this act for another decade, was the subject of an apologetic 2012 House resolution. For 10 points each,
[10] Name this discriminatory law, signed by Chester Arthur in 1882 and repealed in 1943, that banned immigration from a certain Asian nation but did not restrict immigration of other races.
Answer: **Chinese Exclusion** Act (or Law)
[10] The primary means of sidestepping the Chinese Exclusion Act was claiming descentance from Chinese-American parents; that task made easier for some when this city's records were destroyed in a 1906 earthquake and fire.
Answer: **San Francisco**
[10] Many aspiring Chinese immigrants were held at San Francisco's Angel Island, the west coast analogue of this heavily-used immigration station in New York Harbor.
Answer: **Ellis Island** (prompt on partial answer)

9. The first wave of this general movement saw activists like Victoria Woodhull fight for suffrage and other forms of legal equality, and its second wave fought for constitutional reform via the Equal Rights Amendment. For 10 points each,
 [10] Name this general term for movements that seek to create gender equality.
 Answer: **feminism** (accept word forms)
 [10] In *The Feminine Mystique*, Betty Friedan argues that housewives have been "buried alive" because they have not been allowed to experience self-actualization, the pinnacle of the "hierarchy of needs" proposed by this psychologist.
 Answer: Abraham **Maslow** (accept **Maslow's** hierarchy of needs)
 [10] The second book of this landmark 1949 Simone de Beauvoir work begins by noting that "One is not born, but rather becomes, a woman."
 Answer: The **Second Sex** (accept Le **Deuxième Sexe**)
10. The singer of this song pleads "Give me a second, I, I need to get my story straight" before trying to reconcile a broken relationship. For 10 points each,
 [10] Name this song, whose slow motion music video shows the band performing in the midst of a bar fight. Its chorus notes that "we can burn brighter/than the sun."
 Answer: **We Are Young**
 [10] "We Are Young," along with "Carry On" and "Why Am I The One," appears on this album by the New York band fun.
 Answer: **Some Nights**
 [10] This singer of "Tightrope" from *The ArchAndroid* is featured on "We Are Young."
 Answer: Janelle **Monáe**
11. For 10 points each, give the following about electromagnetic radiation in space.
 [10] Radiation from this band of the electromagnetic spectrum causes a roughly 2.7 Kelvin background temperature in space. This radiation is a remnant from the Big Bang.
 Answer: **microwave** radiation (accept **cosmic microwave background radiation** or **CMBR**)
 [10] Most of the solar radiation absorbed by the Earth lies in this band of the EM spectrum, which has wavelengths between those of visible light and microwaves.
 Answer: **infrared** radiation (accept **IR** radiation)
 [10] This event is the eruption of a plume of energy on the Sun followed by a coronal mass ejection. These events can send UV radiation towards Earth, disrupting satellite communication.
 Answer: Solar (or stellar) **flares**
12. For 10 points each, give the following about epic poetry.
 [10] This Old English epic poem tells the story of a Geatish hero who slays the monster Grendel.
 Answer: **Beowulf**
 [10] This Sanskrit epic poem, which includes the Bhagavad Gita, sees Arjuna advised by his charioteer in the Kurukshetra War.
 Answer: **Mahabharata**
 [10] Like many other epic poems, *Beowulf* and the *Mahabharata* employ this narrative technique, known by a three-word Latin phrase, in which a story opens in the middle or at the conclusion, and uses flashbacks to relate past events.
 Answer: **in medias res**

13. This quantity is the same for all points on a rigid rotating wheel, even though the edge sweeps a greater distance per time than the center. For 10 points each,
 [10] Name this quantity, often denoted lowercase omega, which measures a point's angular displacement per unit time.
 Answer: **angular velocity** (accept **rotational velocity**; do not accept or prompt on "velocity")
 [10] Angular velocity is typically measured in this unit per second. There are 2π of these in a full circle.
 Answer: **radians** (accept **radians per second**)
 [10] This other quantity is the rotational analogue of mass. For a point mass m rotating around an axis r units away, it is equal to mr^2 .
 Answer: (first mass) **moment of inertia** (prompt on "rotational inertia"; do not accept or prompt on partial answers)
14. For 10 points each, answer the following relating to the 1859 Battle of Solferino.
 [10] Solferino is in modern Italy, but at the time of the battle it was held by this Empire led by Franz Joseph I.
 Answer: **Austria** (accept **Austrian** Empire; do not accept or prompt on Austria-Hungary or similar)
 [10] The battle was won by a coalition of Sardinian forces under Victor Emmanuel II and French forces under this leader, who served as President of the Second Republic and Emperor of the Second Empire.
 Answer: **Napoleon III** or **Louis-Napoleon** Bonaparte (prompt on Bonaparte, but do not accept or prompt on Napoleon or Napoleon Bonaparte)
 [10] Henri Dunant was horrified by the aftermath of the battle; in an 1863 meeting in Geneva, he joined in the founding of this international organization dedicated to assisting those wounded in war. Clara Barton founded the American branch of this organization.
 Answer: International Committee of the **Red Cross** (accept American **Red Cross**)
15. He abandons his wife and child in Nantucket, and nails an Ecuadorian coin to the mainmast of his ship to motivate his crew. For 10 points each,
 [10] Name this captain of the whaling vessel *Pequod*, who fervently pursues the creature that bit off this man's leg.
 Answer: Captain **Ahab**
 [10] Ahab sails after this white whale, the namesake of the Melville novel in which he appears.
 Answer: **Moby Dick**
 [10] The captain of this whaling ship also loses two of his sons to Moby Dick. This ship later picks up Ishmael after the *Pequod* is destroyed.
 Answer: **Rachel**
16. The edema factor is a toxin produced in this disease. For 10 points each,
 [10] Name this bacterial disease that is spread by spores. Its Ames strain was used as a biological weapon in 2001, when it was mailed to victims.
 Answer: **anthrax**
 [10] A vaccine for anthrax was developed by this French scientist who described how heat slows microbial growth in foods, leading to a namesake technique now commonly used on milk.
 Answer: Louis **Pasteur** (accept **pasteurization** and word forms)
 [10] Pasteur used heat-treated nutrient broth to help disprove this theory of microbial reproduction in favor of germ theory and biogenesis.
 Answer: **spontaneous generation** (prompt on partial answers)

17. For 10 points each, answer the following about Jewish religious offices.
[10] One who is extensively trained in Jewish law is ordained with this title, which denotes the chief official of a synagogue.
Answer: **Rabbi** (accept **Rabbanim**)
[10] As a sign of the covenant between God and Abraham, a Mohel [MOY-ul] performs this action on eight-day-old Jewish boys.
Answer: **circumcision** (accept word forms; accept **brit** milah; accept **bris** milah; accept any answer that describes removing the foreskin)
[10] This title is given to a cantor who leads a congregation in musical prayer.
Answer: **Hazzanim** (accept **shaliach tzibbur**)
18. One quote from this work states “Without an army for the people, there is nothing for the people.”
For 10 points each,
[10] Name this work of propaganda, first published in 1964, that praised Marxism and Leninism.
Answer: The **Little Red Book** (accept, but do not reveal, **Quotations from Chairman Mao** Zedong)
[10] *The Little Red Book* collects quotations of this first Chairman of the Communist Party of China.
Answer: **Mao** Zedong
[10] Mao led this event which oversaw the redistribution of wealth in an attempt to purge capitalistic thought from the population.
Answer: **Cultural Revolution**
19. This compositional form uses exposition, development, and recapitulation to explore a musical idea.
For 10 points each,
[10] Name this type of musical structure common in Classical-era music, especially the first movement of multi-movement works.
Answer: **sonata**(-allegro) form
[10] The standard form for these compositions is four movements: a sonata, an adagio, a scherzo, and an allegro or rondo. Of course, variations on this standard form are common; Beethoven's ninth and final work of this type flips the adagio and scherzo.
Answer: **symphony**
[10] This Austrian, “the Father of the Symphony,” is considered a pioneer of sonata form. Of his 106 symphonies, Surprise, Clock, and Drumroll were written in London.
Answer: (Franz) Joseph **Haydn**
20. Peter Minuit bought this territory from an unknown tribe of Native Americans. For 10 points each,
[10] Name this island that, upon being purchased in 1626 for 60 guilders worth of trade goods, became part of New Netherland.
Answer: **Manhattan** Island
[10] The Treaty of Westminster transferred New Netherland, including Manhattan Island, from the Netherlands to the English, whereupon it became this British colony.
Answer: Province of **New York** (accept **New York** Colony; accept word forms)
[10] This Dutch statesman was Director-General of New Netherland when it was given to the English; in that role, he oversaw development of the city of New Amsterdam, what is now New York.
Answer: Pieter (or Petrus) **Stuyvesant**