1. **The villain in this movie speaks to the protagonist while the song "Boum!" plays and then later reappears while the song "Boom Boom" plays. The antagonist of this film is introduced walking towards the camera in a continuous shot while telling a story about rats eating each other. In one scene in this movie, the protagonist changes vehicles, getting into an (*)** Aston Martin, a callback to an earlier film in the series. At the end of this movie, the title estate is attacked by Silva, resulting in the death of M. For 10 points, name this most recent James Bond film.
ANSWER: _Skyfall_

052-14-86-15101

2. **A leader of this dynasty names a set of 214 "radicals" that were codified in his namesake dictionary of written characters. This dynasty was weakened by an attack on the Legation Quarter which forced the Eight Nation Alliance to intervene, and by the "unequal treaties." Its final ruler, (*)** Puyi, was born six years after a long-nailed empress dowager of this dynasty inflamed the anti-Western Boxer Rebellion. It mandated that all men adopt a long queue as part of their hairstyle. For 10 points, name this last dynasty of imperial China, which was run by Manchus until 1911.
ANSWER: **Qing** dynasty [or **Ching** dynasty; or **Manchu** dynasty until it is read; do not accept "Qin"; do not accept "Chin"]

104-14-86-15102

3. **Along with the yidam and the protector, a person with this title makes up the Three Roots. These people may either be "developed" or, more respectably, "sprul-sku." The second-highest person with this title is said to be a reincarnation of Amitabha. The most important of these people is the head of the (*)** Yellow Hat sect and is the reincarnation of a bodhisattva. This title takes its name from a translation of the word "guru," and the identity of the current "Panchen" one is disputed. For 10 points, name these leaders in Tibetan Buddhism, who include the Dalai.
ANSWER: **lama**s [or specific ones such as Dalai **Lama** or Panchen **Lama**]

190-14-86-15103

4. **This monarch was raised under the Kensington System, which was created by John Conroy. The Bedchamber Crisis occurred during the reign of this monarch and led to Lord Melbourne remaining Prime Minister. Richard Cobden helped Robert Peel repeal the Corn Laws under this monarch. This last of the (*)** Hanoverian monarchs was made Empress of India by Benjamin Disraeli. The Great Exhibition was organized by this queen's husband Prince Albert. For 10 points, name this longest reigning British monarch, who ruled for much of the nineteenth century.
ANSWER: Alexandrina **Victoria**

149-14-86-15104

5. **One composer from this country wrote a virtuostic violin piece titled _Ziegeunerweisen_ and was the dedicatee of Saint-Saens's _Introduction and Rondo Capriccioso_. Another composer from this country included movements like "Distant Dance" and "In the Generalife" in his depiction of _Nights in the Gardens of_ this country. An orchestral suite titled after this country includes repeating (*)** "Alborada" movements and was composed by Rimsky-Korsakov. For 10 points, name this home country of Pablo de Sarasate and Manual de Falla, for which Isaac Albeniz composed _Iberia_.
ANSWER: Kingdom of **Spain** [or Reino de **Espana**]

228-14-86-15105

6. **One member of this family names a law with Weiss that describes the magnetic susceptibility. Two members of this family won a Nobel for producing phosphorus-30 by bombarding aluminum with alpha particles. Jacques and his brother, two members of this family, discovered piezoelectricity, which was later used in a sensitive electrometer to measure (*)** radioactivity. That brother and his wife discovered radium and polonium. For 10 points, identify this family of mostly Polish scientists that included Pierre and Marie.
ANSWER: **Curie** [prompt on **Sklodowska**; prompt on **Joliot**]

7. **A woman in this novel says, "Whatever our souls are made of, his and mine are the same," about a character who throws apple sauce into another boy's face. This novel's frame story involves Nelly Dean giving hospitality to Lockwood. Edgar Linton owns Thrushcross (*)** Grange, which is near the title estate of this work. That estate is inherited by Hindley, the foster brother of Catherine Earnshaw's beloved Heathcliff. For 10 points, name this novel by Emily Bronte.
ANSWER: *Wuthering Heights*

8. **In bacteria, this structure is composed of beta-1,4 linked N-acetylglucosamine and N-acetylmuramic acid, which is a polymer known as peptidoglycan. This structure is composed of silica and is called a frustule in diatoms. In fungi, the constituent of this structure is chitin. Holes in this structure are called plasmodesmata. This structure is usually fairly rigid as a result of (*)** turgor pressure, and it is not found in animal cells. For 10 points, name this outer layer, constructed of cellulose for plants, that surrounds the cell membrane.
ANSWER: **cell wall**

9. **Joseph Brady studied stress and ulcer growth in this order of animals. Wolfgang Köhler rejected Edward Thorndike's theory of learning as trial-and-effect, and proposed the concept of "insight," after observing animals of this order retrieving food. The (*)** "wire mother" and "pit of despair" were structures used in one study of this order of animals, whose attachment patterns to iron and cloth mothers were studied by Harry Harlow. Jane Goodall studied a type of these animals exemplified by Nim Chimpsky. For 10 points, identify this order of animals including gorillas and chimpanzees.
ANSWER: **primate**s

10. **This author's characters include the Communist Bayard, who warns people about Nazi concentration camps, and Frank Lubey, who marries Lydia after missing the World War II draft by one year. This author of *Incident at Vichy* wrote about Steve Deever's partner, who is convicted of shipping defective airplane parts, in his play (*)** *All My Sons.* In another of his plays, Tituba, Giles Corey, and John Proctor are among those accused in the Salem Witch Trials. For 10 points, name this American playwright of *The Crucible.*
ANSWER: Arthur **Miller**

11. **This man developed sails for ships while fleeing, and after safely reaching Cumae, he dedicated a temple to Apollo. This man was exiled from Athens after pushing his nephew Perdix off a roof. He helped King Cocalus solve a riddle using an ant and a drop of honey, then plotted the murder of King (*)** Minos by sending boiling water to his bath. This man gave a ball of yarn to Ariadne and crafted wings for him and his son Icraus. For 10 points, name this craftsman who created the Labyrinth.
ANSWER: **Daedalus**

12. **This man's series of 100 etchings of Biblical scenes and illustrations of Fontaine's fables were commissioned by Ambroise Vollard. A Lithuanian flag appears behind a burning synagogue in one of his paintings, which depicts a New Testament event in the presence of a menorah and a ladder. Many of this artist's paintings are set in his birthplace of (*)** Vitebsk. An upside down dancing peasant and a woman milking a goat appear in another of his paintings, in which a man with a green face stares at another goat. For 10 points, name this painter of *The White Crucifixion* and *I and the Village*.
ANSWER: Marc Zaharovich **Chagall**

13. **Six people died in Oregon during World War II due to Japanese attempts to cause these events. Only public buildings were destroyed in another of these events that occurred following the British victory at Bladensburg. Catherine O'Leary's (*)** cow allegedly caused one of these events. Many people died during another one of these events because locks were placed on the doors of the Triangle Shirtwaist Factory. For 10 points, identify these types of events, one of which, in 1871, destroyed much of Chicago.
ANSWER: **fire**s

14. **A character in this film explains, "I used to sell kisses for the milk fund" while trying to excite a man who claims to be Shell Oil Junior, and often refers to her past liaisons as "the fuzzy end of the lollipop". That love scene repeatedly cuts to a tango danced by Osgood Fielding and Daphne. In this film, Joe and (*)** Jerry witness a gang massacre in Chicago, then move to Miami and meet Sugar. In this movie's last scene, Jerry reveals that he's not a woman, leading his "lover" to proclaim, "Well, nobody's perfect!" For 10 points, name this Billy Wilder comedy starring Tony Curtis, Jack Lemmon, and Marilyn Monroe.
ANSWER: *Some Like It Hot*

15. **This language's standardization was largely due to a version of the Bible translated by the Petri brothers and Leurentius Andreae. This language was used to write *The Dwarf* and *Barabas* by Par Lagerkvist. Selma Lagerlof used this language to write about *The Wonderful Adventures of (*) Nils.*** An academy devoted to preserving the purity of this language also awards the Nobel Prize in Literature every year. For 10 points, name this Scandinavian language.
ANSWER: **Swedish**

16. **It's not New York, but Treasure Island is an artificial island built for this city's 1939 World's Fair. The Clay-Montgomery building in this city is the old headquarters of Bank of Italy, which became Bank of America. This city's first (*)** earthquake-resistant building, Montgomery Block, was eventually replaced by what is now its tallest, the Transamerica Pyramid. Joseph Strauss oversaw construction of a bridge that connects this city with Marin County across its namesake bay. For 10 points, name this Californian city connected to the Golden Gate Bridge.
ANSWER: **San Francisco,** California

17. **Mossbauer spectroscopy uses this kind of radiation, usually with iron-57 as a source. This symbol is used to represent surface tension in the Young-Laplace equation, the Lorentz factor, and the photon. Annihilation of a positron and electron produces this type of radiation. The Vela satellites first detected (*)** "bursts" of this radiation. For 10 points, identify this Greek letter that names a type of radiation that is higher in energy than alpha and beta radiation.
ANSWER: **gamma**

18. **Richard de Lucy founded Lesnes Abbey in penance for actions against this man. His exile was ended following a meeting at Freteval. This man succeeded Theobald to his most notable position, and he argued against royal authority to punish criminous clerks. This man's bones were burned by Henry VIII; earlier, he opposed the Constitutions of (*)** Clarendon, leading one ruler to apocryphally ask, "Will no one rid me of that turbulent priest?" For 10 points, name this archbishop of Canterbury who was murdered by the knights of Henry II in 1070.
ANSWER: Thomas **Becket** [or Thomas À **Becket**]

19. **These interactions are accounted for by the sixth-power term in the Lennard-Jones potential. The scientist who derived these interactions incorporated them as the n squared a squared over volume squared term in his namesake equation. These interactions occur between various combinations of permanent and induced dipoles. These interactions include the (*)** London dispersion forces, and they are what allow geckos to stick to vertical surfaces. For 10 points, identify these intermolecular forces named for a Dutch scientist.
ANSWER: London-**van der Waals** forces [or London-**van der Waals** interactions; or London-**van der Waals** attractions; prompt on **intermolecular** forces; prompt on **dipole** forces; prompt on London **dispersion** forces]

20. **This author favorably compared Native Americans to Irish peasants in his *Notions of the Americans*. Harry Wilder is pursued by the title pirate in this author's *The Red Rover*. One of this author's characters ransoms Henry March and Tom Hutter before being captured by Hurons. That character created by this writer kills (*)** Magua in another novel, in which Chingachgook mourns the death of his son Uncas. For 10 points, name this author who created Natty Bumppo in *The Leatherstocking Tales*, which include *The Last of the Mohicans*.
ANSWER: James Fenimore **Cooper**

21. **In one novel by this author, the protagonist receives romantic advice from Prince Korasoff. A character created by this author has a child with a man who escapes by rope from the Farnese Tower. In that novel, the protagonist loves Clelia Conti and is adored by his aunt Gina, who marries Count Mosca. Another character created by this author has an affair with Mathilde de la Mole and is executed after shooting at Madame de (*)** Renal. This author created Fabrizio del Donzo and Julien Sorel. For 10 points, name this French author of *The Charterhouse of Parma* and *The Red and the Black*.
ANSWER: **Stendhal** [or Marie-Henri **Beyle**]

22. **The integral of tangent of x is equal to the negative of this function of cosine of x. For an input of negative one, this function gives i times pi. This function grows more slowly than x to the power of epsilon, where epsilon is any number greater than zero. The coefficients of the Maclaurin series for this function are the alternating harmonic series when its input x plus one. Its derivative is (*)** one over x. This function of x plus this function of y equals this function of quantity x times y. For 10 points, name this inverse of the exponential function that is abbreviated ln.
ANSWER: natural **log**arithm [or **ln** until it is read]

23. **Forces loyal to this woman lost to the forces of William Kirkcaldy of Grange at the Battle of Carberry Hill. The Earl of Moray led the Chaseabout Raid against this woman after she married Lord Darnley. This woman was originally promised to Edward VI, but wound up marrying (*)** Francis II of France. Gilbert Clifford alerted Francis Walsingham to a plot to place this woman on the English throne. This woman was killed after the Babington Plot failed. For 10 points, name this relative of Queen Elizabeth, who was the mother of James I of England.

ANSWER: **Mary, Queen of Scots** [or **Mary I of Scotland**; or **Mary Stuart**; prompt on partial answer; do not accept "Bloody Mary"]

1. This country surrounds the Sea of Marmara, which is connected to the Aegean Sea by the Dardanelles. For 10 points each:
[10] Name this country south of the Black Sea. Its city of Istanbul is split between Europe and Asia.
ANSWER: Republic of **Turkey**
[10] This tallest mountain in Turkey is legendarily associated with the area where Noah's Ark came to rest.
ANSWER: Mount **Ararat**
[10] Turkey's Asian portion is called Anatolia; in modern times, its European section is usually named after the "East" part of this region. This region's "Northern" and "Western" subsections are found in Bulgaria and Greece, respectively.
ANSWER: **Thrace** [or **Trakya**]

192-14-86-15201

2. This system of ethics strives to maximize a given concept, typically by maximizing happiness and limiting suffering. For 10 points each:
[10] Name this theory of ethics that was first developed by Jeremy Bentham.
ANSWER: **utilitarianism** [or word forms]
[10] This British philosopher wrote a book titled *Utilitarianism.* He also wrote *On Liberty.*
ANSWER: John Stuart **Mill**
[10] Mill developed this idea in *On Liberty.* According to this principle, only actions that hurt other people should be prohibited in a society.
ANSWER: **harm** principle

149-14-86-15202

3. A black servant holding flowers stands on the right side of this painting. For 10 points each:
[10] Identify this painting by Edouard Manet, in which the title, nude woman reclines atop white pillows. A black, yellow-eyed cat crouches near the title woman's feet.
ANSWER: *Olympia*
[10] Manet's *Olympia* was likely inspired by the *Venus of Urbino*, a 16th century work by this Venetian painter of the *Pesaro Madonna.*
ANSWER: **Titian**
[10] Another painting that that took inspiration from Titian's *Venus of Urbino* was this oil painting by Ingres, whose title woman with several extra vertebrae smiles coyly at the viewer.
ANSWER: *Grande Odalisque*

229-14-86-15203

4. Answer the following about World War I events in the Atlantic Ocean, for 10 points each.
[10] This country entered the war soon after the sinking of the *Lusitania.* The Zimmerman telegram was a German attempt to get Mexico to wage war on this country.
ANSWER: **United States** of America [or **US**A; prompt on **America**]
[10] The *Lusitania* was sunk by one of these boats, whose name came from the German for "submarine."
ANSWER: **U**-boats [or **Unterseeboot**en]
[10] Germany's Far East Squadron was defeated by the British in a 1914 battle centered on this island group, after trying to launch an attack on Stanley.
ANSWER: the **Falkland** Islands

233-14-86-15204

5. In this novel Peter Walsh obsesses over the title character's refusal of his marriage proposal. For 10 points each:
[10] Name this novel that is a day in the life of the title upper-class housewife who is preparing for a party. Septimus Smith commits suicide in this work.
ANSWER: *Mrs. Dalloway*
[10] This is the author of *Mrs. Dalloway*. She also wrote about the Ramsey family in *To the Lighthouse*.
ANSWER: Virginia **Woolf**
[10] In *Mrs. Dalloway*, Septimus Smith jumps out of one of these objects when Dr. Holmes comes to take him away. Holden breaks all of these objects in his garage after he learned that Allie died.
ANSWER: **window**

6. For 10 points each, identify some American generals who have had tanks named after them.
[10] The M26 tank is named for this man, who led an unsuccessful expedition into Mexico to capture Pancho Villa and the American Expeditionary Force in World War One.
ANSWER: John Joseph **Pershing**
[10] The primary U.S. tank in World War Two was the M4 tank, named for this Civil War general who commanded a "March to the Sea" that ended with the capture of Savannah.
ANSWER: William Tecumseh **Sherman**
[10] The current M1 tank is named for this general, who succeeded William Westmoreland as commander of the Vietnam War.
ANSWER: Creighton **Abrams**

7. For 10 points each, answer some questions about the Theater of the Absurd.
[10] Vladimir and Estragon have inane conversations in this author's *Waiting for Godot.* Two characters live in trash cans in his play *Endgame.*
ANSWER: Samuel **Beckett**
[10] The protagonist yells "I am not capitulating!" at the conclusion of this author's *Rhinoceros,* a play often considered to be an allegory for the rise of fascism.
ANSWER: Eugene **Ionesco**
[10] This recurring Ionesco character is the protagonist of *Rhinoceros.*
ANSWER: **Berenger**

8. He collaborated with Anna Schwartz on *A Monetary History of the United States.* For 10 points each:
[10] Name this economist who founded monetarism and wrote *Capitalism and Freedom.*
ANSWER: Milton **Friedman**
[10] Friedman was a professor at this university, where he trained several young Chilean economists. Richard Posner, whose work focuses on law and economics, also teaches there.
ANSWER: University of **Chicago**
[10] In the monetary equation of exchange, nominal GDP is equated to the money supply times this quantity. Monetarism is based on the assumption that this quantity is relatively stable.
ANSWER: **velocity** of money [or **velocity** of circulation]

9. Building on the current design of this church began when Henry III ordered it to be built where St. Peter's abbey was located. For 10 points each:
[10] Name this London church that was the site of Prince William's marriage to Catherine Middleton. British monarchs are typically crowned in this church.
ANSWER: **Westminster Abbey** [or **Collegiate Church of St. Peter at Westminster**]
[10] Henry III ordered the construction of a shrine to this monarch, who had renovated St. Peter's Abbey, at Westminster Abbey. This son of Aethelred the Unready was canonized by Pope Alexander III in 1161.
ANSWER: **Edward the Confessor** [prompt on **Edward**]
[10] Westminster Abbey is mostly built in this style, which was popular in the high and late medieval period. Evolving out of Romanesque architecture, this style is uses flying buttresses.
ANSWER: **gothic** architecture

149-14-86-15209

10. The "double" form of this phenomenon occurs in birefringent materials. For 10 points each:
[10] Name this phenomenon in which a wave changes direction upon entering a new medium with a different namesake index.
ANSWER: **refraction**
[10] Fermat's principle of least time is illustrated by this law which uses a simple equivalence of ratios to compute the angle of refraction.
ANSWER: **Snell's** law
[10] Using Snell's law, this quantity is calculated as the arcsine of quantity n_2 over n_1 times the sine of the angle of refraction.
ANSWER: **critical angle**

014-14-86-15210

11. Since this value for carbon-14 is known, it is possible to calculate when a piece of biological matter was last alive. For 10 points each:
[10] Identify this quantity which gives the average amount of time required for fifty percent of a radioactive isotope to decay. Carbon-14's is about five thousand seven hundred years.
ANSWER: **half-life**
[10] This New Zealand-born physicist coined the term half-life, in addition to conducting an experiment in which alpha particles were scattered by gold foil.
ANSWER: Ernest **Rutherford**
[10] For a reaction of this order, the half-life equals the natural logarithm of two divided by the rate constant; thus, radioactive decay processes are of this order.
ANSWER: **first** order [or any equivalents involving **one**]

234-14-86-15211

12. Castanets, a tamtam, and a whip are among the unorthodox percussion instruments scored for this piece. For 10 points each:
[10] Name this piece consisting of a fugue and variations on the incidental music to *Abdelazar*.
ANSWER: *The **Young Person's Guide to the Orchestra*** [or Op. **34**]
[10] *The Young Person's Guide to the Orchestra* was composed by this English composer who wrote the opera *Peter Grimes*.
ANSWER: Benjamin **Britten**
[10] Another composition designed for education is this work by Sergei Prokofiev in which the duck is represented by an oboe and the grandfather by a bassoon.
ANSWER: ***Peter and the Wolf*** [or ***Petya i volk***; or Op. **67**]

190-14-86-15212

13. This horse was faster than Hrungnir's Gullfaxi. For 10 points each:
[10] Name this eight-legged horse owned by Odin. He was fathered by the stallion Svadilfari and mothered by the god of trickery.
ANSWER: **Sleipnir**
[10] That aforementioned Norse god of trickery was this one, father to monstrous creatures like Sleipnir and Jormungandr.
ANSWER: **Loki**
[10] Another horse in Norse mythology was Grani, used by Siegfried to carry off this dragon's hoard of gold. Before becoming a dragon, this greedy brother of Regin killed his father.
ANSWER: **Fafnir**

14. This object is first discovered lying half-buried among the weeds in a lagoon, and its first use results in the arrival of a boy named Johnny. For 10 points each:
[10] Identify this item, used by the characters of a certain novel to indicate who has the right to speak, which is smashed when Roger drops a large rock onto Piggy.
ANSWER: the **conch** shell
[10] The conch shell is used by Ralph to call together the survivors of a plane crash on an initially-paradisiacal Pacific island in this novel by William Golding.
ANSWER: *Lord of the Flies*
[10] These characters from *Lord of the Flies*, a pair of twins who act nearly identically, are the first to discover "the Beast", which is later found to be the corpse of an ejected fighter pilot.
ANSWER: **Samneric** [or **Sam** and **Eric**; accept names in either order]

15. This country was where British forces first used Maxim guns in the Matabele Wars. For 10 points each:
[10] Name this modern-day country where the Ndebele people revolted against the British South Africa Company. The Pioneer Column established its colonial capital of Salisbury, now called Harare.
ANSWER: Republic of **Zimbabwe**
[10] The British South Africa Company was led by this man, who founded the De Beers diamond company. He also founded a scholarship for foreign students at Oxford.
ANSWER: Cecil John **Rhodes**
[10] This is the dominant ethnic group of Zimbabwe, who led revolts against colonial rule called the Chimurenga. These people founded the ancient city of Great Zimbabwe.
ANSWER: **Shona** people

16. This process typically occurs to oceanic crust since it is heavier than continental crust. For 10 points each:
[10] Name this process in which a tectonic plate is pushed below another one at a convergent boundary.
ANSWER: **subduction**
[10] The deep focus type of these events occurs in Wadati-Benioff zones near subduction zones. The strength of these events is measured with a seismograph.
ANSWER: **earthquake**
[10] This area is produced by the addition of sediments to the non-subducting plate in a subduction zone.
ANSWER: **accretionary wedge** [or **accretionary prism**]

17. Identify the following about the Industrial Revolution in Britain, for 10 points each.
[10] Boys from workhouses were often employed in this task, the cleaning of ash and soot from cramped and hot spaces.
ANSWER: **chimney sweep**ing [or word forms]
[10] The Revolution brought about this group of textile workers, opposed to innovations such as stocking and spinning frames for fear that their jobs would be replaced.
ANSWER: **Luddite**s
[10] Another odious profession, coal mining, was made slightly more tolerable by George Stephenson and Humphry Davy's inventions of these explosion-proof illumination devices.
ANSWER: **safety lamp**s [prompt on **lamp**s]

18. This collection includes the story about a man who wants to learn about a character known as "A Man About Town." For 10 points each:
[10] Name this collection of stories which includes the story of Jimmy Valentine, who reveals his identity in order to save a child locked in a safe.
ANSWER: *The **Four Million***
[10] In this other short story from *The Four Million,* Della sells her hair in order to buy a golden chain for Jim, while Jim sells his watch to buy a set of jeweled combs for Della.
ANSWER: "The **Gift of the Magi**"
[10] This author of "The Gift of the Magi" and "The Ransom of Red Chief" is famous for his clever twist endings.
ANSWER: **O. Henry** [or William Sydney **Porter**]

19. Acid reflux refers to when gastric acid damages this organ. For 10 points each:
[10] Name this organ that passes a bolus of food through the cardiac sphincter to the stomach.
ANSWER: **esophagus**
[10] The esophagus receives food from this part of the throat located below the nasal cavity and above the larynx.
ANSWER: **pharynx**
[10] The esophagus transports food through wave-like contractions of smooth muscle known by this term.
ANSWER: **peristalsis**

20. The narrator of this novel feels the Milky Way flow through him while witnessing a silk worm factory fire that nearly kills Yoko. For 10 points each:
[10] Name this novel that focuses on the affair between the self-proclaimed western ballet expert Shimamura and the geisha Komako. It takes place in a hot-spring resort in the title region.
ANSWER: *Snow Country* [or *Yukiguni*]
[10] This Japanese author of "The Dancing Girl of Izu" and *The Sound of the Mountain* wrote *Snow Country*.
ANSWER: Yasunari **Kawabata**
[10] Kawabata also wrote a novel, narrated by Uragami, focusing on this game's Move 121. That novel focusing on this game is about the retirement of its master Honinbo Shusai.
ANSWER: **Go**

21. These particles come in up, down, top, and bottom flavors. For 10 points each:

[10] Name these subatomic particles that make up neutrons and protons.

ANSWER: **quarks**

[10] The J/psi meson consists of this quark and its antiquark. It is paired with the strange quark.

ANSWER: **charm** quark

[10] This force, which is carried by gluons, holds quarks together.

ANSWER: **strong** nuclear force [or **strong** interaction]