

# Round 3

## Tossups

(Tossup 1) This artist frequently painted the “White Place,” a rock formation near her home, and painted a series of jack-in-the-pulpits. This artist painted a white hollyhock floating beside a ram’s head and used stripes of red and a bright color gradient on each side of her Cow’s Skull: Red, White, and Blue. For the point, name this artist who frequently painted flowers and bones near her New Mexico home.

ANSWER: Georgia *O’Keeffe* (accept Georgia Totto *O’Keeffe*)

(Tossup 2) This type of matter is theorized to be composed of weakly interacting massive particles, or “WIMPS.” The existence of this type of matter is deduced from galactic rotation curves. Along with a similarly-named form of energy, this type of matter makes up 95 percent of the mass-energy of the universe. For the point, name this type of matter that is named for not being observable.

ANSWER: *dark* matter

(Tossup 3) In one war, this ruler’s armies were defeated at Ramillies and Blenheim (**BLEM-um**) by the Duke of Marlborough. This ruler persecuted Protestants with his Edict of Fontainebleau, which revoked the Edict of Nantes. In this ruler’s regency, a revolt known as the Fronde was suppressed under the leadership of Cardinal Mazarin. The Palace of Versailles was built under this king. For the point, name this “Sun King,” France’s longest-reigning monarch.

ANSWER: *Louis XIV* (prompt on Louis)

(Tossup 4) As a child, this woman successfully petitioned Proctor and Gamble to change a sexist TV ad implying only women do dishes. This actress, who first gained fame as the love interest in USA Network’s series *Suits*, later gave birth to her child Archie in 2019, 7th in line for the English royal throne. For the point, name this member of the House of Windsor by marriage who, with her husband Harry, stepped back from public life in “Megxit.”

ANSWER: Meghan *Markle*

(Tossup 5) In a novel set in this country, a man nicknamed “Picture” uses an umbrella to combat a “civic beautification program.” A novel set in this country follows a “witch” and a boy with large knees who join Saleem Sinai to form the title group, who are born on the night that this country gains independence from the British Raj. For the point, name this setting of Salman Rushdie’s *Midnight’s Children*, a South Asian country governed from New Delhi.

ANSWER: *India* (accept Republic of *India*; accept *Bharat* Ganarajya)

(Tossup 6) The TTV method was used to discover these objects in the TRAPPIST-1 system. The transit method can be used to find large ones of these objects. The first observed variety of these bodies were “hot Jupiters.” These bodies may be able to support life if they are located in the zone of habitability, nicknamed the “Goldilocks zone.” For the point, name these extra-solar bodies that orbit other stars.

ANSWER: *exoplanets* (accept descriptions like “*planets* that orbit *other stars*”)

(Tossup 7) According to legend, the bones of one of these animals from Wawel [**VAH-vell**] hang at a Polish cathedral. In Germanic myths, a dwarf transformed into one of these animals to protect the Rhinegold, and was named Fafnir. Cadmus legendarily grew soldiers from the teeth of these mythical creatures. The Chinese *Qinglong* is, for the point, what kind of large, mythical reptile known in Europe for breathing fire?

ANSWER: **dragons** (accept *Wawel dragon* or *smok Wawelski* before “dwarf” is read)

(Tossup 8) In this novel, a young boy who lives inside the Elephant of the Bastille, Gavroche, is killed at a barricade with Enjolras and the Friends of the ABC. In this novel, Eponine falls in love with Marius, but passes a love letter to him from his eventual wife. Cosette is raised by a man with the designation 24601 in this novel-turned musical. For the point, name this Victor Hugo novel in which Inspector Javert (**zhah-VAIR**) pursues ex-convict Jean Valjean during the 1832 June Rebellion in Paris.

ANSWER: Les **Miserables** (accept Les **Mis**)

(Tossup 9) In this country, the soda Irn Bru routinely outsells Coca-Cola. Neeps and Tatties are a popular vegetable dish from this country. This country’s national food is made by boiling a sheep’s heart and lungs inside of its stomach. Black pudding and haggis are commonly eaten during breakfast in this country. For the point, name this country whose cuisine is prominent in cities like Glasgow and Edinburgh.

ANSWER: **Scotland** (prompt on the United Kingdom; prompt on the UK; prompt on Britain; prompt on Great Britain)

(Tossup 10) This man signed two treaties with Omar Torrijos which transferred control of the Panama Canal. This man noted that America was threatened by a “crisis of confidence” in his “Malaise” speech. This US President brokered secret negotiations leading to the Egypt-Israel Peace Treaty. The Iran Hostage Crisis contributed to this man losing the Election of 1980. For the point, name this former peanut farmer who was succeeded as President by Ronald Reagan.

ANSWER: Jimmy **Carter** (accept James Earl **Carter**)

(Tossup 11) This operation is formally defined using a series of infinitesimally small rectangles and a sum named for Riemann. This operation can be applied to the product of two functions using a technique named for it ‘by parts’. This operation applied to ‘x’ gives ‘one-half x squared’, plus a constant. For the point, give this operation that gives the area under a curve, the opposite of differentiation.

ANSWER: **integration** [or **integral**; accept more specific answers]

(Tossup 12) This sense’s inputs are processed by mitral cells, and are determined by vibration and particle size and shape. Damage to this sense’s bulb in the forebrain can result in parosmia or anosmia, the loss of this sense. This sense can be used by some animals to detect pheromones. The loss of this sense can also inhibit the sense of taste. For the point, name this sense which is centered on the nose.

ANSWER: **smell** (or **olfaction**)

(Tossup 13) In this country, the 26th of July Movement was led by a man who claimed “History Will Absolve Me” after leading an attack on the Moncada Barracks. The CIA-backed Brigade 2506 unsuccessfully attempted to seize control of this country in the Bay of Pigs invasion. In 1962, the Soviet Union moved ballistic weapons into this country sparking a namesake “missile crisis.” For the point, name this country where Fidel Castro led from Havana.

ANSWER: Republic of **Cuba**

(Tossup 14) An epigraph to this short story describes a “Manitou” spirit that lives in the Catskill Mountains, and is attributed to the fictional historian Diedrich Knickerbocker. This story’s title character is shocked to learn that his dog, Wolf, has died in the years since he played ninepins with a group of ghosts. For the point, name this short story by Washington Irving in which the title Dutch colonist sleeps through the American Revolution.

ANSWER: **Rip Van Winkle**

(Tossup 15) In this ballet’s first act, the protagonist goes hunting with Benno and Wolfgang, and in its second act, a line of dancers join hands to perform the Dance of the Cygnets. A dancer in this ballet performs thirty-two consecutive fouettes while portraying Odile, who is transformed by the evil wizard Rothbart so she can trick Siegfried into thinking she is Odette. For the point, name this ballet by Tchaikovsky in which the same dancer usually portrays both the “black” and “white” title birds.

ANSWER: **Swan Lake** (accept **Lebedinoye ozero**)

(Tossup 16) The opening shots of this war were fired at the Battle of Jumonville Glen. During a decisive battle in this war, the Marquis de Montcalm and James Wolfe died fighting on the Plains of Abraham. The disastrous Braddock Expedition in this conflict forced a young George Washington to construct Fort Necessity. Quebec was ceded to Britain as a result of, for the point, what North American theater of the Seven Years’ War?

ANSWER: **French and Indian War** (prompt on “Seven Years’ War” before mentioned)

(Tossup 17) Neoisoptera are varieties of these animals that have evolved symbiotic relationships with fungi. Species of these detritivores in the southern hemisphere build mounds, as in Brazil’s caatinga. These insects form symbiotic relationships with bacteria that allow them to eat cellulose, and may be the source of over 10% of total methane emissions. For the point, name these eusocial insects known for eating wood.

ANSWER: **termites** (accept **termitoidae**)

(Tossup 18) This desert’s Dragon’s Breath Cave is home to the largest subterranean lake in the world. The Omaheke Province in this region is home to most of the Herero people. This region is the home of the San people who were evicted from its central game reserve. The inland delta of the Okavango River is located in this desert. For the point, name this desert in southern Africa that covers parts of Namibia, Botswana, and South Africa.

ANSWER: **Kalahari** Desert

(Tossup 19) A description of this event includes one hundred forty-four thousand “first fruits” held by a figure standing on Mount Zion. This event includes Seven Bowls, such as a scorching sun and the drying of the Euphrates River, and the marriage of the Lamb. A book attributed to John of Patmos describes this event, which includes the breaking of the seventh seal and the coming of the Messiah. For the point, the book of Revelation describes which cataclysmic event, in which all of creation is destroyed?

ANSWER: the *end of the world* (accept reasonable equivalents like *apocalypse* or *Armageddon*, accept *Revelation* until mention)

(Tossup 20) A character in this novel pretends to act on behalf of Lord Godalming to investigate shipments of dirt sent to numerous houses in London. In a chapter of this novel taken from Doctor Seward’s diary, Mina sobs that she is “unclean” when her mouth leaves blood streaks on the shirt of her husband, Jonathan Harker. Abraham Van Helsing hunts the title Count in, for the point, what Bram Stoker novel about a Transylvanian vampire?

ANSWER: *Dracula*

(Tossup 21) The Early and Late Wisconsin periods are named for the presence of these objects. These objects acquire layers of firn, and may form moulins [**moo-LAHNS**], shafts that transport water to the base of these objects. The movement of these objects can form roche moutonnees [**roash moo-toh-NAYS**], cirques, and drumlins. Icebergs can break off of, for the point, what large, slow-moving bodies of ice?

ANSWER: *glaciers*

(Tossup 22) In this novel, Pew breaks into the Admiral Benbow Inn to search the belongings of Billy Bones after delivering a “black spot.” In this novel *Hispaniola*, Squire Trelawney sponsors a voyage led by Captain Smollett, who loses command of the in a mutiny. The one-legged cook Long John Silver appears in, for the point, what novel by Robert Louis Stevenson in which Jim Hawkins goes on an adventure with pirates?

ANSWER: *Treasure Island* (or the *Mutiny of the Hispaniola*)

(Tossup 23) Conic sections with an eccentricity other than one will have at least two of these, whereas conics with an eccentricity of one will always have just one. There are an infinite number of these for the graph of  $x^2 + y^2 = 1$ , and for the function  $y = x^2$ , the  $y$  axis is one of these. For the point, name these objects about which a shape may be reflected while still appearing the same.

ANSWER: *lines of symmetry* [or clear equivalents; accept *axis of symmetry* or reflection *symmetries*]

(Tossup 24) After two soldiers from this country killed two US officers in the “axe murder incident,” the United States responded with the massive Operation Paul Bunyan. This country’s ruling family established Juche (**JOO-chay**), a policy of self-reliance, as its national ideology. In 1950, this country started the “Fatherland Liberation War” by invading its southern neighbor. For the point, name this country led by the Kim family from Pyongyang.

ANSWER: *North Korea* (accept **DPRK**; accept *Democratic People’s Republic of Korea*; prompt on Korea)

(Tossup 25) This poet utilized parataxis, a technique common to oral poetry, placing the subject or main idea at the beginning of a sentence, then expanding upon it with clauses. Metaphor, simile, and epithet—such as “rosy-fingered Dawn”—appear frequently in this author’s work. According to legend, he was born in Chios [KEE-occe] but, for centuries, an entire branch of scholarship has been devoted to debating whether or not this person actually existed, or is really a composite. For the point, what blind Greek poet wrote the *Iliad* and *Odyssey*?

ANSWER: **Homer**

(Tossup 26) Auguste Rodin used this material to make a larger-than-life Saint John the Baptist after he was accused of casting another work, called *The Age of* [this material], from a living model. Another sculpture in this metal shows a young man wearing a broad-brimmed hat and standing over the head of a giant. For the point, name this material used to make Donatello’s *David*, an alloy made from copper and tin.

ANSWER: **bronze** (prompt on “metal” until mentioned)

(Tossup 27) The Kerr Metric characterizes these objects by mass, charge, and angular momentum. These objects can be thought of as singularities in space-time, and energy can be extracted from a rotating one in the Penrose process. These objects’ gravitational pull is stronger than the speed of light. For the point, name these massive dark objects that suck in the space around them.

ANSWER: **black holes** (prompt on “ergosphere”)

(Tossup 28) This novel’s protagonist is shocked to see her father remove his glasses to shoot Tim Johnson at the request of Calpurnia and the sheriff of Maycomb. In this novel, Heck Tate insists that Bob Ewell fell on his own knife while attacking a child in a ham costume after Jem is carried home by the reclusive Boo Radley. For the point, name this Harper Lee novel about Atticus Finch, narrated by his young daughter, Scout.

ANSWER: **To Kill a Mockingbird**

(Tossup 29) An event in this city may have been started by Daniel “Pegleg” Sullivan.” *The Devil in the White City* partially chronicles crimes in this city committed by H.H. Holmes at his “Murder Castle.” An 1893 World’s Fair in this city was the site of the first Ferris Wheel and represented a return to glory after a disastrous fire supposedly started by Mrs. O’Leary’s cow. An 1871 fire devastated, for the point, what largest city in Illinois?

ANSWER: **Chicago**

(Tossup 30) These substances’ efficiency is given by the turnover number. These substances can be partially or totally deactivated by “poisoning,” commonly with lead compounds. Heterogeneous examples of these substances are in different phases than the rest of the reaction. Enzymes are a biological example of these substances. For the point, name these substances that reduce the activation energy to increase the rate of a reaction.

ANSWER: **catalysts**

## Tiebreaker or Replacement

(Tossup 31) The Molyneux problem concerns whether information from touch can be transferred to this sense. The phi phenomenon occurs due to fatigue in muscles that aid with this sense. This sense is processed with rod and cone cells, which transmit information to the ganglion cells of the retina. Information from this sense is carried by the optic nerve. For the point, name this sense that relies on the eyes.

ANSWER: *sight* (accept *vision*)