

PARFAIT Round 5

Rutgers New Brunswick
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1 Rutgers New Brunswick Tossups, Round 5

1. Apéry's constant is the result of evaluating it at 3. A meromorphic function with a single pole at 1, where it evaluates to the harmonic series, it can be expanded as a Laurent series about $s = 1$, with coefficients known as Stieltjes constants. Its logarithm is related to an integral which includes the prime number counting function π , and it was used in the first proofs of the prime number theorem, as it can also be expressed as an infinite product of geometric sums of primes. For ten points, name this function, which has trivial zeros at even negative integers, and may have all nontrivial zeros with a real part of $1/2$ according to a namesake hypothesis.

Answer: Riemann zeta function

2. Home to Holland College, a system named for the man who originally surveyed it, this province's land is divided into 64 numbered lots, which comprise the majority of its three counties. Its smaller towns include Greenwich, which is noted for its sand dunes, Montague, a fishing hub, Georgetown, the seat of its Kings County, and Summerside, its next-largest city. Its capital and largest city was the site of a notable 1864 conference, which gave the province its nickname "The Birthplace of Confederation." For ten points, name this province connected to New Brunswick by the Confederation Bridge, Canada's smallest, with its capital at Charlottetown.

Answer: Prince Edward Island

3. One of its leaders supposedly performed miracles in front of a crowd of 30,000 at Saint-Denis, while the University of Paris advised the king to command the crowd to disband. Another movement, led by a shepherd named Nicholas, disbanded after reaching Genoa, when its leader failed to part the waters of the Mediterranean Sea. Despite the failure of the fourth crusade, the leader of the more famous part had supposedly received a letter from Jesus to take to Philip II, and Stephen de Cloyes led his followers to Marseilles, where they boarded ships offered by Hugo Ferreus and William Porcus. For ten points, name this attempt in which French and German peasants may have attempted to free the Holy Land, which resulted in many of its participants being sold into slavery.

Answer: Children's Crusade or La Croisade des Enfants or Kinderkreuzzug

4. In a Herman Melville poem lamenting a royal friend, he remarks "[h]ere on this settle / He wore the true crown." In a play centering on that royal friend, his death is announced by Pistol and described by a hostess, and though Fluellen cannot recall his name, he remembers him as having "a great belly-doublet." He is better known for hiding in a laundry basket and being thrown into a river while scheming to improve his finances by courting the Mistresses Ford and Page, and for being called "a huge hill of flesh" before being turned away by Hal, the Prince of Wales, who later becomes Henry V. For ten points, name this knight who appears in both parts of Shakespeare's *Henry IV*, who also falls in love in *The Merry Wives of Windsor*.

Answer: Sir John Falstaff

5. A close study shows four men toiling in a field in the background on the right, and the clouds that dominate the upper portion of the painting may have been inspired by the

artist's studies at Hampstead Heath. The viewer is drawn to the stream in the painting, in which a boat emerges from the brush on the right, and a brown, black, and white dog sits on the banks in the lower portion. One can see "Will Lott's Cottage" to the left of the central figures: two black horses with some red in their saddles who have stopped to drink, and two men who are fording the stream while pulling the title object. For ten points, name this 1821 landscape by John Constable.

***Answer:* Landscape: Noon or The Hay-Wain**

6. Written in response to the propaganda of Jessie Pope, among the themes of this poem are sleep and nightmares; the speaker notes that he wishes that Pope would share in "the smothering dreams," including a vision of a dead man being flung into a wagon, who "plunges at [him], guttering, choking, drowning." Clumsiness prevails in the second stanza, which begins with an alarm, "an ecstasy of fumbling" and "fitting of clumsy helmets just in time." With its title referred to in the closing lines as "The Old Lie" and taken from an ode by Horace, for ten points, name this poem which describes a gas attack during World War I by Wilfrid Owen.

***Answer:* Dulce et Decorum Est**

7. A small battle at Wincanton was the first of this conflict, and saw a loss of about 15 men from both sides. By the end of November, John Churchill and Princess Anne had deserted the royalist side, and royal forces were not eager to fight; the only major engagement took place on December 10, a victory for the rebels at Broad Street in Reading. Irishmen rioted the next evening after news of fishermen's capture of James II off of the English coast, and James' subsequent flight to France was taken as a sign of abdication by the Convention Parliament. For ten points, name this 1688 change of regime, often mistaken as being bloodless, which installed William and Mary as rulers of England.

***Answer:* Glorious Revolution (accept "Revolution of 1688" before 1688 is mentioned)**

8. An old account claimed that Helen of Troy was not mothered by Leda, but rather, by this goddess who had tried to escape Zeus in the form of a goose. Her aspect was a ship's steering wheel and rudder, the same aspect as that of Tyche, whose power she was responsible for checking. Given the epithets Rhamnusia, in honor of her temple at Rhamnos, and Adrasteia, "she whom none can escape," with Dike and Themis, she assisted Zeus in the administration of justice. For ten points, name this Greek goddess of retribution.

***Answer:* Nemesis**

9. Among non-parametric methods of performing this technique are LOESS, LASSO, and feedforward neural networks. "Robust" methods of this type include M-estimation, a generalization of maximum likelihood, and using a metric of least absolute deviation, which uses an L_1 norm as an error measure. A probabilistic method samples a subset of data points, fits them to a parametric model, and checks if any other points deserve to be inliers; this is known as the RANSAC algorithm. Defined as the fitting of data as the combination of predictor variables and an error term, for ten points, name this technique which is often seen in logistic and linear varieties, a special case of which is fitting a line

using a least-squares fit.

Answer: regression analysis

10. Sudden infant death syndrome may be caused by a mutation in its code for leucine tRNA. AZT inhibits its replication as it inhibits the replication of HIV, which causes fatigue. Exercise intolerance may also be caused by mutations of its cytochrome b gene. It has been found to be similar to the genome of *Rickettsia prowazekii*, which has bolstered support for the endosymbiotic hypothesis, and in humans, it has 16,569 base pairs, occurs as between five and ten circular molecules, and is transmitted to future generations through the mother. For ten points, name this type of DNA, which occurs in a certain organelle outside of a cell's nucleus.

Answer: mitochondrial DNA or mtDNA

11. Military successes of this dynasty include Liu Fang's sack of Anam and Pei Ju's pacification of the southern tribes. Failures include defeat by Eulji Mundeok, a general of the Goguryeo kingdom outside of Pyongyang during the reign of the first emperor, Wen₂ di₄, and a more disastrous conflict that caused the uprising that eventually toppled gong₁ di₄ in 618. It did, however, manage to repair the great wall and complete the Grand Canal. For ten points, name this Chinese dynasty, which, upon conquering then Chen₂ reunited Northern and Southern China, preceded the Tang₂, and ruled China from 581 to 618.

Answer: Sui Dynasty

12. A unique member of this group of materials, whose linkage resembles a polypeptide, can be formed by placing caprolactam in a solution of sodium hydride, which initiates a ring-opening polymerization. In 1994, Chen and Kiely produced a "hydroxylated" one that is biodegradable by converting glucose into glucaric acid and interfacing it with hexamethylene diamine. Hexamethylene diamine is also used to produce the most common 6,6 type, which is made through an interaction with adipic acid. For ten points, name this class of polymers, characterized by repeating units of amide linkages, whose members are fibrous and normally used in textiles.

Answer: nylons or polyamides

13. Male participants wear white, seamless, two-piece garment that reveals the right shoulder. It is interrupted by the Mu'tah, which allows participants to rest and shed their ihram clothes. A prayer which begins "Here I am at Thy service O Lord, here I am" known as the talbiyah is recited repeatedly to emphasize one's devotion to God. Other customs include the Sa'ee, traveling seven times between the hills of Safar to Marwah to re-enact Hagar's search for water, and drinking from the well of Zamzam. A trip to Medina is optional, but the tawaf, the circling of the Kaaba seven times, must be performed twice. For ten points, name this pillar of Islam, the pilgrimage to Mecca.

Answer: Hajj (prompt on "pilgrimage to Mecca")

14. British forces had been commanded to evacuate Amherstburg and march towards Burlington leading up to this battle, before which they were pushed near the point of mutiny as the commanding officer refused to stand and fight at Dobson's Farm and MacGregor's Creek. With Americans gaining quickly, General Henry Procter finally did stop near Chatham, by the banks of a river, to engage. Though the British set up cannons and

Indian forces took positions in a swamp to outflank William Henry Harrison's forces, a frontal attack was successful as the cannon fire failed in part due to lack of supplies, and the Americans were superior in numbers. For ten points, name this American victory in the War of 1812, which saw Tecumseh die on the battlefield.

Answer: Battle of the Thames or Battle of Moraviantown

15. She became a medical technician just before World War II and was one of the first women to be recruited by the Marine Corps. Better known for her work on stage, this actress, born Bernice Frankel, starred as Yente the Matchmaker in the Broadway premiere of *Fiddler on the Roof* and won a Tony in 1966 for her portrayal of Vera Charles in *Mame*, which she starred in alongside good friend Angela Lansbury. Also noted for a guest appearance as the whorish bartender Ackmena in the *Star Wars Holiday Special*, for ten points, name this woman, best remembered for her roles as TV's *Maude* and Dorothy Zbornak on *The Golden Girls*.

Answer: Beatrice "Bea" Arthur (accept Bernice Frankel before it is mentioned, and though it would be humorous, do not accept Chris Frankel)

16. The concluding portion of the third one is an allegro nicknamed "The Hunt." The first forms the musical basis for Michel Corrette's motet *Laudate Dominum de coelis* and was reworked for flute by Jean-Jacques Rousseau. In the largo of the last one, a solo violin is accompanied by pizzicato strings, representing a textual description of sitting by a fire while a gentle cold rain falls outdoors, which is part of a sonnet supposedly written by the composer. Numbered RV 269, 315, 293, and 297, for ten points, name this set of concerti, the most famous composition of Antonio Vivaldi.

Answer: The Four Seasons or Opus 8 or Le Quattro Stagioni

17. Three balloon flights measuring it were able to conclude that the geometry of the universe is flat in the BOOMERanG experiment. Its anisotropies are widely studied, including those due to distortions by the inverse Compton effect, known as the Sunyaev-Zeldovich effect, and the gravitational red shift of its photons, known as the Sachs-Wolfe effect. With cosmological red shift, it provides the strongest evidence of the Big Bang. For ten points, name this form of electromagnetic radiation, first observed by Penzias and Wilson, which radiates through the universe at a frequency smaller than infrared.

Answer: cosmic microwave background radiation

18. The opening of act I deviates greatly from its overture, beginning with an orchestra playing in C minor, a simple chorus of shepherds and nymphs, and one of the title characters uttering the other's name in four notes. Noted for its deviation from the composer's preface to a previous opera, *Alceste*, among its highlights are two dances in Act II. One takes place in Elysium but does nothing to console the protagonist, *The Dance of the Blessed Spirits*, while the other, *The Dance of the Furies*, is an attempt to prevent one of the protagonists from entering Hades, and includes many succinct responses of "No!" For ten points, name this reform opera, a treatment of a myth previously treated by Monteverdi, by Christoph Willibald Gluck.

Answer: Orfeo ed Euridice or Orpheus und Euridyka or Orpheus and Eurydice

19. One of the title characters escapes kidnapping by a group of thugs led by the Ruffler by finding refuge in the mad hermit's house, only to be taken again by Hugo and John. Another protagonist is declared mad after granting a pardon of the Duke of Norfolk, though he seems to return to his senses after being briefed on goings on by Humphrey Marlow. Both are declared mad: one by Father Andrew, who taught the other Latin, the other by Henry VIII, the father of the first. For ten points, name this novel, which centers around Tom Canty and Edward Tudor's switching places, a work of Mark Twain.

***Answer:* The Prince and the Pauper**

20. Early in his career, he wrote a tract investigation on the glands of the kidneys, and upon his death, he left an article on taste for Diderot's Encyclopedia unfinished. In 1734, he published *The Considerations on the Causes of the Grandeur and Decadence of the Romans*, which is seen as a transition between his two major works. The earlier work, in epistolary form, is a fictional account of the observations of French society made by Usbek and Rica among others, while the latter puts forth a theory that countries' governments and temperaments are related to their respective climates. For ten points, name this political thinker who wrote *Persian Letters* and *The Spirit of the Laws* and pioneered the theory of separation of powers.

***Answer:* Charles-Louis de Secondat, Baron de La Brède et de Montesquieu**

2 Rutgers New Brunswick Bonuses, Round 5

1. Name these female figures of the Old Testament for ten points each .

10 Because of her advanced age, she laughs inwardly when she hears that she will bear a child from three messengers, but she does end up giving birth to Isaac.

Answer: Sarah

10 At her mother Jochebed's request, she hides her youngest brother Moses in a basket of reeds on the Nile River, so that he will not be caught and killed.

Answer: Miriam

10 Simeon and Levi kill the men of Shechem for treating this sister of theirs like a common harlot. Chapter 34 of Genesis tells of her rape by the prince.

Answer: Dinah

2. Name these Tolstoy works, for ten points each.

10 Pierre Bezuhov inherits an estate from his father, forms a happy family, and plots to assassinate Napoleon.

Answer: War and Peace or Vonya i Mir

10 The Muscovite Olenin is drawn to a caravan of the title figures, falls in love with the peasant girl Lukashka, and attempts to blend into their culture in this novel.

Answer: The Cossacks: A Tale of the Caucasus in 1852 or Kazaki

10 This set of three short stories, vignettes of the title Black Sea city in December, May, and August 1855, describe Tolstoy's experience as a second lieutenant in the Russian army during an 11-month-long siege of the Crimean War.

Answer: Sevastopol Sketches or Sevastopolskye Rasskazi

3. Time for some literary geography! Name these places Lemuel Gulliver travels for ten points each .

10 This nation in the South Pacific, home to people who are not more than six inches tall, is feuding with neighboring Blefuscu over the correct way to eat a boiled egg.

Answer: Lilliput

10 The governor of this island, the island of magicians, gives Gulliver the power to summon the ghost of any historical figure.

Answer: Glubbdubdrib

10 Gulliver boards the *Amboyna* to return home from this country, in which he is made uneasy by the Protestant tradition of trampling on a cross.

Answer: Japan

4. Answer these questions about an anthropologist and works for ten points each ...

10 This collection of observations of a Pueblo tribe in 1935 includes anecdotes about shamans' stories about spirits such as the sky god Apoyan Tachi and the creator god Awonawilona.

Answer: Zuni Mythology

10 The definition of "abnormality" in societies and the labelling of the Pueblo Indians as peaceful and harmonious are among the subjects discussed in this 1934 work, which focuses on the ways of the Kwakiutl, Zuni, and Dobu.

Answer: Patterns of Culture

10 This coiner of the term "racism" was also responsible for *Zuni Mythology* and *Patterns of Culture*, and she focused on Japanese patterns of culture in *The Chrysanthemum and the Sword*.

Answer: Ruth Benedict

5. Answer these related questions for ten points each.

10 A neutral current interaction occurs when this chargeless boson is exchanged between atoms; it mediates the weak nuclear force.

Answer: Z boson or Z^0 boson

10 CERN's Gargamelle, which originally detected a Z particle, is an example of this apparatus, a container filled with a superheated transparent liquid, which is used to track the motion of electrically charged particles.

Answer: bubble chamber

10 Bubble chambers are currently being used to search for these large hypothetical particles, which only interact through the weak force and gravity and are considered a candidate for cold dark matter.

Answer: WIMPs or weakly interacting massive particles

6. Answer these questions about a play for ten points each.

10 The funeral of Antonio María Benavides, and the impending marriage of Angustias to Pepe el Romano are some of the major elements of this play, noted for having no male characters appearing on stage.

Answer: La Casa de Bernarda Alba or The House of Bernarda Alba

10 *La Casa de Bernarda Alba* is the first play in a trilogy by this dramatist and poet.

Answer: Federico García Lorca

10 Perhaps the most sane character in the play is this mother of Bernarda, who expresses her desire to marry and even finds a sheep whom she calls her husband when Bernarda is not keeping her under lock and key.

Answer: María Josefa (accept either name)

7. Answer these questions about an artist and his works for ten points each .

10 Fascinated with chess, in 1911, he painted a *Portrait of Chess Players*, and in 1917 he nailed a coat rack to a floor and called it *Trebuchet*.

Answer: Marcel Duchamp

10 Duchamp supposedly used himself as a model for this work, though the central figure resembles a famous subject of a Leonardo work... except that she has a mustache.

Answer: L.H.O.O.Q.

10 Supposedly a reaction to the exhibition of the Venus of Willendorf, Duchamp signed this work, considered the first piece of found art, R. Mutt.

Answer: Fountain

8. Name these related things for ten points each.

10 Though he supposedly passed away in 2293 minutes after the commissioning of the Enterprise B, he reappeared in 2371 to help Jean-Luc Picard save Veridian III from Dr. Tolian Soran.

Answer: Captain James Tiberius Kirk

10 The English version of this song reached number two on the US charts in 1984, but the third verse of this hit originally written in German mocks jet hunters who all regard themselves as Captain Kirk.

Answer: Neunundneunzig Luftballons or 99 Red Balloons

10 Also known for covers of “You Oughta Know”, “Shake Ya Azz”, and “Baby Got Back”, this “singer” whose version of “Down with the Sickness” appears on the soundtrack for *Dawn of the Dead*, includes a heavily abbreviated “99 Luftballons” on his album *I’d Like a Virgin*.

Answer: Richard Cheese

9. Answer these questions about a philosopher and his works for ten points each .

10 Though Volume I classifies the Kantian noumenon as one of the title entities of this 1856 work, it is noted for its appendix, a famous Criticism of Kantian philosophy, in which the author points out that Kant does not distinguish between the abstract and the concrete.

Answer: The World as Will and Representation or The World as Will and Idea or Die Welt als Wille und Vorstellung

10 Name the author of *The World as Will and Representation*.

Answer: Arthur Schopenhauer

10 Though this controversial Schopenhauer essay claims that while the title group of people have all the tools and weapons necessary to exist, it also claims that they lack a sense of justice and are incapable of great original achievement. He terms their veneration “Christian-Germanic stupidity.”

Answer: On Women or Über die Weiber

10. It originated in the Duchy of Brunswick-Lüneberg in the 17th century. For ten points each ...

- 10 Name this royal house which provided six British monarchs, including four Georges.
Answer: Hanover
- 10 This 1701 amendment to the English Bill of Rights gave Parliament the choice of a royal successor and claimed that only Protestant descendants of Sophia of Hanover could take the British throne.
Answer: Act of Settlement
- 10 The Duke of Cumberland was granted rule of Hanover in 1737, because Hanover would not allow Victoria to rule it under this code.
Answer: Salic Law
11. For ten points each , answer this stuff about the fall of the Western Roman Empire.
- 10 He led a revolt of Germanic mercenaries in 476 after Orestes refused to give them land. He captured and executed Orestes in Piacenza.
Answer: Odoacer or Odovacar
- 10 Odoacer's usurping of the throne of this emperor, the son of Orestes, is commonly seen as the end of the Western Roman Empire.
Answer: Romulus Augustulus or Flavius Romulus Augustus
- 10 Romulus Augustulus was forced to abdicate after Odoacer's forces took this city, which had served as the capital of the Western Roman Empire since 476.
Answer: Ravenna
12. Answer these questions about a group of organisms for ten points each.
- 10 Among the members of this phylum of organisms, named for the organs which allow them to move, are spirotrichs and members of the genus *Paramecium*.
Answer: ciliates or Ciliophora
- 10 In ciliates this polyploid structure controls vegetative processes and cell metabolism. A smaller counterpart is responsible for the control of sexual reproduction.
Answer: macronucleus (prompt on "nucleus")
- 10 Most ciliates undergo this form of sexual reproduction in which two cells line up and their micronuclei divide by meiosis so that they can be exchanged to form new micro- and macronuclei.
Answer: conjugation
13. Name these things relating to Winfield Scott, 5-10-20-30.
- (a) In 1839, Martin Van Buren sent Scott to discuss a peaceful solution to this bloodless border dispute with the governor of New Brunswick.
Answer: Aroostook War
- (b) Scott led American troops in this 20-day amphibious assault of the Mexican-American War, which lasted most of March 1847, and gave the U.S. a base to move inland.
Answer: siege of Veracruz

- (c) As a Whig party candidate, Scott was defeated in the 1852 election by this one-term president.

***Answer:* Franklin Pierce**

- (d) Scott came under fire for this proposal to win the Civil War by blockading the Confederacy, taking control of the Mississippi and Tennessee Rivers, and capturing Richmond.

***Answer:* Anaconda Plan**

14. Name these musical works which depict animals for ten points each.

- 10 This work for solo cello and piano accompaniment, the thirteenth movement of the *Carnival of the Animals*, was the only movement that the composer allowed to be published during his lifetime.

***Answer:* The Swan or Lebed**

- 10 Gyorgy Cziffra is noted for his piano performance of this Rimsky-Korsakov interlude, part of *The Tale of Tsar Saltan*, which depicts an angered title character in numerous chromatic runs.

***Answer:* Flight of the Bumblebee or Polet Schmele**

- 10 Beginning with light chords from the strings and winds, a solo violin represents the title character in this Ralph Vaughan Williams work, based on the poetry of George Meredith.

***Answer:* The Lark Ascending**

15. Answer these related questions on a subject that was excised from ACF Fall, for ten points each.

- 10 This divide-and-conquer algorithm works on a sorted array by comparing the median element to a desired key, eliminating half of the candidates, and repeating until the key is found or there are no remaining elements. It requires logarithmic time to complete.

***Answer:* binary search**

- 10 By placing elements less than a parent as left children and elements greater than a parent in right children, searching for an element in this rooted, acyclic data structure is equivalent to performing binary search on an array.

***Answer:* tree**

- 10 With an invariant that the height of its left subtree and the height of its right subtree differ by at most one, this self-balancing binary search tree, named for its developers, was the first to be implemented.

***Answer:* AVL tree (Adison-Velsky and Landis, for the curious)**

16. He was considered the most beautiful of the Vanir. For ten points each ...

- 10 Name this Norse ruler of the elves, who was also the god of the sun and the moon.

***Answer:* Frey or Freyr or Yngvi**

- 10 At Ragnarok, Frey will be the first to be slain by this fire giant, who is also responsible for setting the world on fire.
Answer: Surt or Surtr
- 10 Frey is weaponless at Ragnarok because he gave his sword to this servant, who was able to arrange Frey's marriage to the giantess Gerd.
Answer: Skirnir
17. Name these Edgar Allan Poe poems for ten points each.
- 10 The title entities, made of silver, gold, alarum, and iron, represent the different ages of man from childhood to death and keep time "in a sort of runic rhyme."
Answer: The Bells
- 10 The speaker, mourning his lost love, is trying to rid his home of a guest who, with all the seeming of a demon's that is dreaming, still is sitting on a bust of Pallas above his chamber door.
Answer: The Raven
- 10 This 1843 poem tells of a gala night in which angels gather to watch a play which Poe calls "the tragedy, Man," at its conclusion. The title character is the hero of that play.
Answer: The Conqueror Worm
18. Name these rivers for ten points each . . .
- 10 Its Great Northern Bend begins in Lanzhou and ends in Inner Mongolia. Beginning in the Kunlun Mountains, this river is noted for the silt deposits it carries after passing through the Loess Plateau.
Answer: Yellow River or Huang He
- 10 Beginning in the Yunnan province of China, this major river of Vietnam, which empties into the Gulf of Tonkin, passes through the eastern end of Hanoi.
Answer: Red River or Song Hong or Hong He or Yuan Jiang
- 10 The Hoa Binh Dam on this river forms Vietnam's largest reservoir. It is also the chief tributary of the Red River.
Answer: Black River or Song Da or Li-hsien Chiang
19. Answer these questions about works and their artist for ten points each.
- 10 This Roman fountain depicts four gods bowing toward an obelisk in the center; some say that the god of the Nile was fashioned as a criticism of Borromini's design of the facade of Sant'Agnes di Agone.
Answer: Fountain of the Four Rivers or Fontana dei Quattro Fiumi
- 10 In this sculpture located in the Cornaro Chapel, an angel wields a spear on the left, while the robed title saint on the right is going through rapture.
Answer: The Ecstasy of Saint Teresa of Avila

- 10 The Fountain of the Triton, the Fountain of the Four Rivers, and *The Ecstasy of St. Teresa* are among the most noted works of this Baroque sculptor.
Answer: Gian Lorenzo Bernini
20. Stuff about feudal revolts, for ten points each.
- 10 Spurred by the imposition of high taxes on serfs, and lords' demands that they rebuild castles without pay, this 1358 revolt in Northern France was led by Guillaume Caillet.
Answer: Jacquerie
- 10 This class of Catalonian peasants rose up against John II in 1462 and Ferdinand in 1485 in response to seignorial abuses. They were appeased by the Sentencia Arbitral de Guadalupe, which allowed lords to buy their freedom at 60 sous per head.
Answer: remences or remensas
- 10 Spurred by the implementation of a poll tax, this 1381 rebellion, led by disgruntled laborers of Kent and Essex, saw the execution of Simon of Sudbury, Archbishop of Canterbury, and Robert de Hales executed and John of Gaunt's castle razed.
Answer: Peasants' Revolt or Great Uprising or Watt Tyler's Rebellion
21. Name these organic reactions involving alkenes for ten points each.
- 10 A phosphonium ylide and an aldehyde or ketone are combined in this common method of producing alkenes.
Answer: Wittig reaction (do not accept "Wittig Rearrangement")
- 10 Ethylene and propylene are commonly produced by pyrolysis, a type of this general process in which carbon-carbon bonds of complex organic molecules are broken down to form simpler hydrocarbons.
Answer: cracking
- 10 The conversion of 1-hexene to 5-decene is an example of this class of reactions in which alkene bonds are redistributed, for which Grubbs, Chauvin, and Schrock shared the 2005 Nobel in Chemistry.
Answer: olefin metathesis or transalkylidenation