Tossups

1. **This novel's main character hides butter in her shoe to use as skin lotion. "I'm a cloud, congealed around a central object, the shape of a pear," is said by its protagonist when considering her body. Protestors at Brett Kavanaugh's hearings wore red gowns and white bonnets to mimic this book's characters, who** (*) whisper five names to each other in bed. Professor Pieixoto, Moira, and Serena Joy are characters in this novel focused on the Republic of Gilead and its pregnancies. Offred is in—for 10 points—what Margaret Atwood "tale" in which women's' lives are controlled?

answer: The **Handmaid's Tale**

2. **This locale with a Wye Oak fitness center hosted the May 2012 G8 summit. Two months after a July 2000 meeting here, the parties issued the Sharm El Sheikh Memorandum. This place once called "Shangri-la" is formally the Naval Support Facility Thurmont and was renamed to honor a grandson of Mamie Doud.   Anwar** (*) Sadat and Menachem Begin [muh-KNOK-cum BAY-gin] were invited to this Maryland locale by Jimmy Carter, where they signed Middle East peace accords. For 10 points—give this presidential retreat known as a "camp".

answer: **Camp David**

3. **André Caplet completed *The Toy-Box* after this composer's death, and the Golliwogg's Cakewalk is part of his *Children's Corner*. Deriding calm sounds, Louis Schneider said the audience was served "agitated water in a saucer" when his 1905 piece evoked wind. A symphonic poem with flute solo was staged by Vaslav Nijinsky to feature nymphs with a** (*) young deer. His *Suite bergamasque* includes the piano movement evoking moonlight, the "Clair de Lune". For 10 points—who is this French composer of *La Mer* and *Prelude to the Afternoon of a Faun*?

answer: Claude **Debussy**

4. **One story by this author begins with Vinson Gowrie's murder, which is falsely attributed to Lucas. This writer also created a short story in which Samuel Beauchamp is executed and Gavin Stephens pays for a funeral. His other stories "Drusilla" and "Ambuscade" were collected into *The Unvanquished*. In his work featuring Quentin Compson and** (*) Thomas Sutpen, Sutpen's hopes for a dynasty end with a plantation burning. Yoknapatawpha [yok'na-pah-TAW-pha], a fictional Mississippi county, was created by—for 10 points—what author of *Absalom, Absalom!*?

answer: William **Faulkner**

5. **In the Ainu Iyomante ceremony, one of these animals is raised and sacrificed. The Yukaghir ancestral hero has a mother who is this animal and in another Russian tale a Tungus clan woman is carried away by one. Ungnyeo is one who turns into a woman and whose son founds Korea. The Inuit believed** (*) Nanook was the master of these, and people hung their hides in igloos hoping for hunting success. The Greeks said Callisto was placed in the sky as one of these called Ursa Major. For 10 points—give these animals that include grizzlies.

answer: **bear** (accept more specific answers like **polar bear**)

6. **Medieval legend says this island's plain of prostration was where the god Crom Cruach required human sacrifice. It's not Crete, but its mythology includes a battle at Slieve Foy over a brown bull. Its historical High Kings included Niall of the Nine Hostages, Colmán Rímid, and Domhnall Midi.   The Giant's Causeway of** (*) hexagonal columns in its north are the work of its legendary Finn MacCool.   The mermaid-like merrows and shrieking banshees are mythical creatures of—for 10 points—what island home to rainbows hiding leprechauns' gold?

answer: **Ireland** or Éire

7. **In one book this character exclaims she is not a Bargain Basement item and enters as others ignite Guy Fawkes fireworks. Controversial pickaninny and blubber soup references were edited from the original "Bad Tuesday" world travel. In titles she is "in the park", "in the kitchen" and "comes back". She won't give references,** (*) slides up the bannister, and pulls an apron from an empty carpet bag upon arriving at 17 Cherry Lane, where she meets Jane, Michael, and the other Banks children. P. L. Travers created—for 10 points—what umbrella-flying nanny?

answer: **Mary** **Poppins** (accept either underlined name)

8. **This city names a linguistics school including Roman Jakobson and René Wellek, and an economic school where Václav Klaus teaches. Its Pankrác Plain is the site of its new residential V Tower. The world's oldest still-working astronomical clock is in its Old Town Square northwest of Wenceslas Square. Milan Kundera's novel *The*** (*) *Unbearable Lightness of Being* describes when Alexander Dubček tried to expand citizen freedoms, a time known as this city's "Spring". For 10 points—give this capital of the Czech Republic.

answer: **Prague** or **Praha**

9. **These two words appear in a 1956 Michael Goldberg painting of onion rolls, and Juan Gris has a poem with these words in a 1915 title. A parrot and a peacock sit on the ledge in a 1714 Alexandre François Desportes example of this genre. A Butcher's Counter is an alternate name for Francisco Goya's one of a** (*) Lamb's Head and Flanks, and another example is Martin Johnson Heade's *Giant Magnolias on a Blue Velvet Cloth*. Tableware, flowers, and fruit are common objects shown in—for 10 points—what type of painting with non-moving objects?

answer: **still life**

10. **In *The Vinegar Tasters* this figure is on the left with a sour expression. When a pedestrian claims this person has no fame, he asks his disciples if he should take up the chariot or archery. His temple was reconstructed after a 1499 fire, and has an Apricot Platform. He compiled *The Spring and Autumn Annals* about the State of** (*) Lu and *The Book of Rites* describes his 6th-century BC life. He explains expected behavior towards elders and rulers to his student Zengzi in the *Xiaojing* [SHAOW-jing]. For 10 points—name this ancient Chinese philosopher.

answer: **Confucius** or **Kǒngzǐ** or **Master Kong**

11. **The actress's Allison Vandermeersh character shows Connor scenes of running with Jenny and then Connor's parents' funeral. In an early role, this actress's character gets a black eye from a passed out Seth. She plays Bobby Riggs' opponent in** *Battle of the Sexes* **and was Gwen** (*) Stacy in two films. In a 2016 film she sings about an aunt who jumps in the freezing Seine River, has her car towed at a Hollywood party, and encourages Sebastian Wilder's jazz career. For 10 points—give this actress of *The Amazing Spider-Man* and *La La Land*.

answer: (Emily) Emma **Stone**

12. **These species appear in a 1909 Frank Shipley Collins title, and R.A. Lewin coined the term phycotechnology** [FI-coh-"technology"] **for uses of these organisms which include ulvophyte and glaucophyte groups. Species in their genus** *Chlorella* **neutralize pollution, and another kind is a source of the growth medium agar. Humans can get shellfish poisoning from their** (*) red tide toxins, and massive growths observable from outer space are called their blooms. Kelp seaweeds are also examples of—for 10 points—what organisms that can turn swimming pools green?

answer: **algae** (accept The **Green Algae** of North America; accept **red algae** or **brown algae**; accept **algal bloom** after "humans")

13. **In this novel, suspicious double entry bookkeeping causes Mintenka to hide in shrubbery accused of thievery. Its epilogue discusses the Great Man theory of history, while its second volume claims a title event was avoidable if a leader had restored the Duke of Oldenburg. This novel's hundreds of characters include** (*) Pierre Bezukhov, who ends up marrying Natasha Rostova, and Andrei Bolkonsky, who is wounded on the battlefield. Leo Tolstoy wrote—for 10 points—what work about combat and serenity?

answer: **War and Peace** or **Voyná i mir**

14. **In Sylvia Plath's "Ariel" this person's "unpeeling" is an act of independence. Pietro Mascagni's opera** *Isabeau* **recasts her as a princess punished for refusing to choose a husband. Known as Godgifu** [GOAD-yee-voo] **to contemporaries, this figure in an 1897 John Collier painting sits on a red saddle and has long hair. The namesake of a** (*) Coventry, England music festival, the Peeping Tom watched this figure while she ended a burdensome tax by riding disrobed through the streets. For 10 points—give this English "lady", for whom a Belgian chocolatier is named.

answer: Lady **Godiva** or **Godiva**, Countess of Mercia

15. **Jean-André Deluc created a portable type of this device and increased accuracy by boiling a component. A brass box and 33 springs connected to a pointer were in the aneroid one by Lucien Vidie. Android's Ice Cream Sandwich release included one hikers exploit for elevation readings. Emulating a limit on** (*) pumped water columns, a mercury-filled glass tube creating a vacuum was how Evangelista Torricelli invented this device. A weather report reading of "30.2 inches" is obtained from—for 10 points—what device measuring atmospheric pressure?

answer: **barometer**

16. **In this country, the seizure of Adolph Gamlin's rifle signaled the start of the Balangiga massacre. Januario Galut is considered a traitor here due to the Battle of Tirad Pass tactically won by Peyton March. U.S. General Henry Lawton died in this country where the Moro Rebellion was addressed by** (*) John J. Pershing. Its Malolos Republic was led by Emilio Aguinaldo, and the U.S. solidified control of the Leyte and Luzon islands in this Pacific country. For 10 points—give this country that saw the 1899 Battle of Manila.

answer: Republic of the **Philippines** or Republika ng **Pilipinas**

17. **The D infinity H and C infinity V point groups are seen in molecules with this shape that is inapplicable to the Jahn-Teller theorem. The simplest alkyne has this shape. VSPR ["vesper"] theory assigns this geometry to compounds with steric number five and three lone pairs, as seen in beryllium hydride and xenon difluoride, and also to** (*) steric two with no lone pairs. Other examples are carbon dioxide and hydrogen cyanide. For 10 points—give this arrangement containing 180-degree bond angles, with atoms in a straight row.

answer: **linear**

18. **This representative authored the 2008 Economic Stimulus Act. In 2011, *60 Minutes* claimed this politician unfairly bought Visa stock while curbing credit card legislation. In February 2018 this politician possibly set a record by speaking for eight hours about young undocumented immigrants. This owner of Napa Valley's Zinfandel Lane Vineyard is a daughter of a** (*) Baltimore mayor. A 29 percent approval rating dogs this 1980s chair of the California Democratic Party. For 10 points—name this woman who has regained her position as Speaker of the House.

answer: Nancy **Pelosi**

19. **An Alexander Pushkin poem with this title states "My voice for you is languid, low and light". In a title ending with this word Dylan Thomas tells the subject "Rage, rage against the dying of the light". T.S. Eliot wrote"Rhapsody on a Windy" one, and in a John Keats poem, it is tender. The musician Juliek, the teacher** (*) Moshe The Beadle and the victim Akiba Drumer appear in a book with this title that describes Auschwitz, the first in a Elie Wiesel trilogy that includes *Dawn* and *Day*. For 10 points—give this term for times the sun is down.

answer: **night** [the works are "Night", "Do Not Go Gentle into that Good Night", "Rhapsody on a Windy Night", and *Night*]

20. **Benjamin Dexter and 1200 others were doing this activity when stranded in an 1871 disaster, and the 1897 Overland Relief Expedition helped others. There are around 400 *E. glacialis* left, one goal of this activity. A 1946 agreement on it assigns Sandefjord bureau to collect statistics; that treaty later imposed a** (*) commercial moratorium. The Grenadines island of Bequia is one aboriginal exception where residents collect muktuk meat, baleen, or sperm oil. For 10 points—give this activity that seeks beluga or humpbacks.

answer: **whale** catching or **whaling** (prompt on "fishing" or "dolphin catching")

21. **Some of these in protein structures are called Schellman, omega, and beta-bulge. A structure known by this term that creates concentration gradients in the medulla was described by anatomist Jacob Henle. Kirchoff's second law states the of potential differences in one equals** (*) zero. Graph theorists user this term for an edge starting and ending at the same vertex. Computer programmers use "do", "for", and "while" types to execute the same set of instructions over and over. For 10 points—give this term for a circular path.

answer: **loop**

22. **A number in base B has this property if its decimal expansions contains all digits with equal frequency. This kind of matrix commutes with its conjugate transpose, and matrices also called "canonical" containing Jordan blocks are known by this term. The Q-Q plot is a way to test data against a Gaussian distribution also known by this term, which is the** (*) bell curve. This term is also used for a line perpendicular to a given plane. For 10 points—give this term that means standard, typical, and not weird.

answer: **normal** (accept word forms)

Bonuses

1. It is said the majority of your body tissue's nitrogen originates from this process. For 10 points each—
A.   A German chemist developed what process that converts nitrogen and hydrogen to ammonia?
answer: **Haber** process or **Haber–Bosch** process
B.   The Haber process involves this kind of chemical reaction, meaning it gives off heat. This term is the opposite of endothermic.
answer: **exothermic**
C.   Ammonia is also decomposable into nitrogen and hydrogen, meaning the reaction is this kind in which a reaction on the product gives the reactants back.
answer: **reversible** (or **bidirectional**) reaction or process

2. For 10 points each—give these answers related to the Indian ruler Akbar the Great:
A.   Tradition states Akbar tamed one of these animals named Hawa'i and used it in warfare. Hannibal marched 38 of these pachyderms across the Alps to the Battle of the Trebia.
answer: **elephant**s
B.   In 1589 Akbar annexed this region ruled by Yakub Shah Chak. This name is now in a state with Jammu, and is disputed between India and Pakistan.
answer: **Kashmir**
C.   Akbar was the third emperor of this dynasty begun by Bābur, which ruled until it was deposed by the British in 1857.
answer: **Mughal** dynasty or emperors

3. The leaders of this second-largest Christian church include the Archbishop of Constantinople, Bartholomew I ["the first"]. For 10 points each—
A.   Name this faith which is the majority church in Romania and Greece.
answer: Eastern **Orthodox** Church or **Orthodox** Catholic Church (accept the clued **Greek Orthodox**y or **Romanian Orthodox** Church)
B.   Bartholomew's seat at the Church of Saint George is in Istanbul, the largest city of what country with capital Ankara?
answer: Republic of **Turkey** or **Türkiye** Cumhuriyeti
C.   In the Orthodox Church, this feast is celebrated on August 6th. It commemorates a Mount Tabor event when Jesus became radiant and conversed with Moses and Elijah.
answer: Feast of the **Transfiguration**

4. This language was used in the 13th century *Song of the Nibelungs*, in which Siegfried desires to marry Queen Brünhild. For 10 points each—
A.   Give this language that Bertolt Brecht used for his *Threepenny Novel*.
answer: **German** or **Deutsch** [accept **Middle German** or **High German**]
B.   *The Road Back* is a sequel to this German author's description of World War I, *All Quiet on the Western Front*.
answer: Erich Maria **Remarque**
C.   The 1999 Literature Nobel recipient, this German's Danzig trilogy includes *The Tin Drum*, *Cat and Mouse*, and *Dog Years*.
answer: Günter **Grass**

5. The definition of this term is individually separate and distinct, but the word is sometimes confused with a homophone meaning cautious or on the down low. For 10 points each—
A.　　Give this term for mathematics including game theory and set theory.
answer:　　　**discrete** (mathematics) [sometimes confused with discreet]
B.　　One discrete math problem is this one in finding the shortest possible route that allows a businessman to visit a set of cities. It is known by the abbreviation TSP.
answer:　　　**traveling salesman problem**
C.　　Leonhard Euler [OY-ler] solved the Königsberg bridge problem, showing there was no walk that crossed this many bridges exactly once. This is also the smallest number N for which a polygon with N sides cannot be classically constructed.
answer:　　　**7** [the hexagon is constructible with straightedge and compass, the heptagon is not]

6. For 10 points—name these fictional lands:
A.　　Leslie Burke and Jess Aaron build a castle stronghold in this region across a creek in a Katherine Paterson work. May Belle later becomes its queen.
answer:　　　**Terabithia** (accept **Bridge to Terabithia**)
B.　　Calormen and Archenland are neighbors of this fictional land where one can find the Fords of Beruna, the Shuddering Wood, and the Cair Paravel.
answer:　　　**Narnia** (accept **Chronicles of Narnia** by C.S. Lewis)
C.　　The Clock Barrens and Umber's Temple are locales in this land ruled by Eliot Waugh and Margo Hanson in Lev Grossman's *The Magicians*.
answer:　　　**Fillory**

7. Damned individuals are on the left of this fresco. For 10 points each—
A.　　Michelangelo created what depiction of Christ's second coming on the altar wall of the Sistine Chapel?
answer:　　　The **Last Judgement**
B.　　Around 1504 Michelangelo completed this sculpture now standing in Florence's Galleria dell'Accademia. This marble figure slew the biblical giant Goliath.
answer:　　　**David**
C.　　Florence's Palace of the People contains Michelangelo's sculpture of this Greek figure. He stands in front of a faun and holds grapes.
answer:　　　**Bacchus**

8. In 1793, Alexander Mackenzie traveled across this country and reached the Pacific Ocean. For 10 points each—
A.　　Name this country whose Atlantic coast was visited by Leif Erikson in the year 1000.
answer:　　　**Canada**
B.　　This French explorer misunderstood the Iroquois word "kanata", meaning village, as the area's name. He made three voyages and established the Fort Charlesbourg colony in 1541.
answer:　　　Jacques **Cartier**
C.　　Cartier traveled this gulf, which contains Anticosti Island. Named for a 3rd century Catholic deacon, this gulf borders the Labrador Peninsula and is north of Cape Breton Island.
answer:　　　Gulf of **Saint Lawrence**

9. Unstable relationships in 1930s Hollywood are depicted in this author's "Crazy Sunday". For 10 points each—
A.   Name this author of *The Diamond as Big as the Ritz* and "The Curious Case of Benjamin Button".
answer: F(rancis) Scott **Fitzgerald**
B.   This "Great" Fitzgerald character is shot by George Wilson after George's wife Myrtle is killed in a hit-and-run.
answer: **Jay** **Gatsby** (accept either underlined name)
C.   Cecilia Brady loses both her father Pat and studio manager Monroe Stahr in this novel completed from Fitzgerald's notes after the author's death.
answer: The **Last Tycoon**

10. Its venues included the Alpensia ski resort. For 10 points each—
A.   Name this county of Gangwon Province which hosted the 2018 Winter Olympics.
answer: **Pyeongchang**
B.   After recovering from an October 2017 crash requiring 62 stitches, this snowboarder won his third halfpipe gold medal.
answer: Shaun **White**
C.   John Shuster and Tyler George were among the winners in this competition, the first ever gold in this event for the U.S.
answer: (men's) **curling**

11. This woman was imprisoned after the revolt against her second husband, Henry II of England. For 10 points each—
A.   Name this 12th century Duchess who was "of Aquitaine".
answer: **Eleanor** (or Aliénor) of Aquitaine
B.   One reason Eleanor joined the rebellion was the 1170 murder of this Archbishop of Canterbury. Tradition holds Henry exclaimed, "Will no one rid me of this turbulent priest?"
answer: **Thomas Becket** or **Thomas à Becket** (prompt on "Thomas", "Saint Thomas of Canterbury", or "Thomas of London")
C.   Although Eleanor and her first husband, France's Henry II, were estranged and had produced no male heir, this was the official reason for their annulment.
answer: **consanguinity** within the fourth degree or **they were** third **cousins** or **blood relation**s or **they were related** (any answer that says they had close **kinship** is fine, but not if they say something incorrect like "they were aunt and nephew")

12. Around 1.3 billion watched their televised performance from Dodger Stadium in 1994. For 10 points each—
A.   Name this trio of operatic singers capable of hitting high notes. They were Plácido Domingo, José Carreras, and Luciano Pavarotti.
answer: The **Three Tenors**
B.   A Three Tenors signature song was "Nessun Dorma" from *Turandot*, an opera by what composer of *La Bohème* and *Madame Butterfly*?
answer: Giacomo **Puccini**
C.   The Tenors also used this Neapolitan song composed by Eduardo di Capua and Alfredo Mazzucchi. Its title means "my sunshine".
answer: '**O sole mio** ["oh SOL-ah MEE-oh"]

13. In June 2015, this state's city of Charleston saw a mass shooting at its Emanuel African Methodist Episcopal Church. For 10 points each—
A.   Name this state governed by Henry McMaster from its capital of Columbia.
answer: **South Carolina**
B.   South Carolina's senators are Lindsey Graham and this man, who in 2014 became the first black Republican senator popularly elected since 1966.
answer: Tim **Scott**
C.   Scott was originally appointed to replace Jim DeMint by this former governor, who was the U.S. ambassador to the United Nations. Her parents emigrated from India.
answer: Nikki **Haley**

14. In chemistry, this means a molecule's opposing charges based on the orientation of its chemical bonds and spatial structure. For 10 points each—
A.   Give this term that in magnets refers to the places where the lines of magnetic flux enter and emerge. Compasses point to a northern one.
answer: **polar**ity or magnetic **poles** (accept word forms)
B.   This derived unit of magnetic flux density can be expressed as kilograms over amperes times seconds squared. Denoted capital T, it is named for a Serbian whose resonant transformer circuit is known as his coil.
answer: **tesla** (accept **Nikola Tesla** or **Tesla coil**)
C.   Also called dipolar ions and inner salts, the amino acid diphthamide is an example of these molecules that contain functional groups with a charge but have an overall charge which is neutral.
answer: **zwitterion**

15. Despite efforts to close this facility, it still detains forty men. For 10 points each—
A.   Give this Cuban facility opened in 2002 that formerly held Mohammed Nechle, one of the so-called "Algerian Six".
answer: **Gitmo** or **Guantánamo Bay** detention camp (prompt on "Camp Delta" or "Camp X-Ray")
B.   Guantánamo still enprisons Khalid Sheikh Mohammed, a member of this organization run by Osama bin Laden. Its Arabic name means the "base" or "foundation".
answer: **al-Qaeda**
C.   Court martials resulted for the treatment of al-Qaeda and other prisoners at this Iraq facility west of Baghdad. This Iraqi prison appeared in the documentary *Standard Operating Procedure*.
answer: **Abu Ghraib**

16. For 10 points each—name these Oscar Wilde characters:
A.   Basil Hallward paints this man's picture, which becomes grotesque while this man retains beauty as he does terrible things.
answer: **Dorian Gray** (accept either underlined name; accept The **Picture of Dorian Gray**)
B.   This friend of Algernon Moncrief lives under an assumed identity and wants to marry Gwendolen Fairfax. In Act III, Miss Prism reveals his father was a general and he does in fact have the name in the play's title.
answer: **Earnest** or **Jack Worthing** (accept any underlined name)
[from *The Importance of Being Earnest*]
C.   Wilde wrote a 1891 play about this biblical woman who does the dance of seven veils. Wilde changed her request from the head of John the Baptist to that of the prophet Jokanaan.
answer: **Salome**

17. Max Nierenstein suggested this term for an amine compound Casimir Funk isolated. For 10 points each—
A.   Give this term for nutritious compounds including tocopherol, retinol, and biotin.
answer: **vitamin** [which means "vital amine"]
B.   Niacin and folate are members of a vitamin complex denoted by this letter. A deficiency of the first one, thiamine, causes beriberi.
answer: vitamin **B** complex
C.   This deficiency of niacin causes inflammation, dementia, and mouth sores. The term is derived from Italian for "skin".
answer: **pellagra** [the Italian word for skin is "pelle"]

18. This structure was designed by Adrian Smith. For 10 points each—
A.   Give this 163-floor building in the United Arab Emirates, the tallest structure in the world.
answer: **Burj Khalifa** or **Burj Dubai**
B.   In 2011 Islamic clerics ruled people living above the 80th floor should extend this time's fasting since they can see the sun longer. This holy month will next be observed in May 2019.
answer: **Ramadan**
C.   This non-governmental organization has criticized Dubai's treatment of migrant construction workers. Kumi Naidoo leads this group that campaigns for "a world where human rights are enjoyed by all".
answer: **AI** or **Amnesty International**

19. Recent surveys suggest around ten percent of Americans agree with this belief. For 10 points each—
A.   Give this notion whose "necessity" titles a Percy Shelley essay. Generally, this is a belief that no god or higher power exists.
answer: **atheism** (accept word forms; accept The **Necessity of Atheism**)
B.   One modern atheist is this man who first described memes. This evolutionary biologist has written *The Selfish Gene* and *The God Delusion*.
answer: Richard **Dawkins**
C.   This atheist ran a Manhattan family planning center with her sister Ethel Byrne, and founded the American Birth Control League in 1921.
answer: Margaret **Sanger**

20. For 10 points each—give these things used by psychologists:
A.   Franz Mesmer was the modern pioneer of this technique Pierre Janet used with trauma patients. People in this state do not perform voluntary actions and are susceptible to suggestion.
answer: **hypnosis** (accept word forms)
B.   The Exner scoring system can be used with these ten symmetric pictures shown to elicit a cognitive response. They were developed by a German in the 1920s.
answer: **Rorschach** test or **inkblot** test
C.   Mary Cover Jones used this conditioning technique in the Little Peter experiment by starting the fearful children 12 feet away from a rabbit and supplying candy. Sacking out uses this technique to prevent horses from frightful outbursts.
answer: **desensitizing** or **desensitization** (accept word forms)

21. This mathematician developed a singularity theorem with Stephen Hawking. For 10 points each—
A.   Name this English scientist who created six prototiles that cover the plane in a non-repeating way.
answer: Roger **Penrose** (accept **Penrose tiling**)
B.   This term describes the lack of a regular pattern in the Penrose tiling. The trigonometric functions do *not* have this property because they repeat values at regular intervals.
answer: **aperiodic**
C.   The second Penrose tiling uses this geometric shape with two pairs of adjacent congruent sides. Its name reflects the shape's use in a toy flown on windy days.
answer: **kite**

22. The origin of this name is a water god of Gaul named Arausio. For 10 points each—
A.   Give this colorful word which is now conflated with a citrus fruit. The principality that did contain Roman Arausio had royals who married into a Dutch noble house.
answer: **Orange**
B.   The House of Orange joined with this other house for which the capital of the Bahamas is named.
answer: **Nassau** (accept House of **Orange-Nassau**)
C.   There is evidence this University's teams were "the Orangemen" due to a Dutch colonial role. Donovan McNabb is an alumnus of this college whose athletes are now just "the Orange".
answer: **Syracuse**
[another theory traces the lineage through William of Orange's Protestantism and the Irish and Scottish Orange fraternal order]