16. Answer each of the following about an important work of Christian iconography for ten points.
1. Condemned by Vives in *De causis corruptarum atrium*, this work of hagiography divides the ecclesiastical year into four periods and contains a Lombard history in its biography of Pope Pelagius.
> Answer: The ***Golden Legend*** (or ***Legenda aurea*** or ***Lombardica historia***)
2. This beatified Genoese archbishop authored *The Golden Legend* in the thirteenth century.
> Answer: Jacobus de **Voragine** (or Jacob of **Voragine**)
3. Voragine recounts that these men were scourged on November 8 and that their names were initially unknown, but divine revelation has revealed them to be Severus, Severianus, Carpophorus, and Victorinus.
> Answer: The **Four Crowned Martyrs** (or **Four Crowned Saints** or ***Quatuor Coronati***)

17. Answer each of the following from electrical engineering as relates to transmission lines for ten points.
1. The inverse of the admittance, this quantity symbolized Z has the resistance as its real part and the reactance as its imaginary part. It is of crucial importance for transmission lines.
> Answer: the **impedance**
2. This immensely useful graphical tool gives the relation of the impedance to the transmission and reflection coefficients for a transmission line. It takes the form of a circle drawn above scales.
> Answer: the **Smith chart**
3. This pair of linear PDE's govern the voltage and current in a transmission line. They take the form of Helmholtz equations with the product of the capacitance, inductance, and frequency as parameter.
> Answer: the **telegraph**er's equations

18. Name each of the following about a composer and his works for ten points.
1. This composer is notable for his numerous *Études-tableaux*, a *Prelude in C-sharp Minor*, and his 1892 *Piano Concerto No. 2 in C Minor*.
> Answer: Sergey Vasilyevich **Rachmaninoff** (or Sergey Vasilyevich **Rakhmaninov** or Sergey Vasilyevich **Rachmaninov**)
2. Rachmaninoff's Opus 43, this work in an introduction and twenty-four variations in A minor is based on the namesake Italian composer's famous twenty-fourth caprice for solo violin.
> Answer: ***Rhapsody on a Theme of Paganini*** *(Introduction and 24 Variations), in A minor for piano & orchestra, Op. 43*
3. This eighteenth and most iconic of the variations in the *Rhapsody on a Theme of Paganini* is a slow movement based on an inversion of the theme.
> Answer: the ***Andante cantabile***

19. Answer each of the following about a writer and his works for ten points.
1. This American author created such seminal works as *Americana*, *Ratner's Star*, *The Body Artist*, and the novella *Pafko at the Wall*.
> Answer: Don **DeLillo**
2. This interminable DeLillo novel uses *Pafko at the Wall*, a recounting of Bobby Thompson's "Shot Heard 'round the World," as a prologue, then obliquely discusses the ill-formed love of Nick Shay and Klara Sax.
> Answer: ***Underworld***
3. Entitled after an obscure Rolling Stones single, this fourth section of *Underworld* is set in "Summer 1974" and culminates in Klara's marriage to Carlo Strasser.
> Answer: "**Cocksucker Blues**"

20. Answer each of the following about a method of great use in solving ordinary differential equations for ten points.
1. The Laurent series is, in some sense, a complex generalization of this, the representation of a function of a single variable as a power series in that variable. One about zero is called a Maclaurin series.
> Answer: **Taylor** series
2. This technique provides series solutions of quasi-linear second-order ordinary differential equations by writing the coefficient functions as Laurent series, assuming that these have regular singular points at zero.
> Answer: the **method of Frobenius** (or **Frobenius' method**)
3. Using the method of Frobenius requires one to solve the indicial equation, the solutions to which are known as this. If these differ by a non-integer value, two linearly independent series are obtained.
> Answer: the **root**s **of singularity**

11. Answer each of the following about an important work of history for ten points.
1. The four and a half surviving books of this work recount such events as the murder of Galba and Otho's suicide. The manuscript ends in the midst of the collapse of Civilis' revolt.
        Answer: The __Histories__ (or __Historiae__)
2. *The Histories* were created by this Roman historian also famous for *The Annals* and *Germania*.
        Answer: Publius Cornelius **Tacitus** (or Gaius Cornelius **Tacitus**)
3. In *The Histories*, Tacitus recounts the two battles fought at this location on the Postumian Way in western Venetia. Vespasian's defeat of Otho at the second allowed him to take Rome.
        Answer: **Cremona**

12. Answer each of the following pertaining to paintings relating to works of music for ten points.
1. This Russian expressionist and author of "Yellow Sound" and *Sounds* is better known for his various *Compositions* and *Improvisations*, the thirty-first of which is known as *Sea Battle*.
        Answer: Vasily Vasilyevich **Kandinsky**
2. The second of these is subtitled *Portrait of Thomas Carlisle* while the first is their artist's best-known work. Please give the full title.
        Answer: Whitsler's __Arrangements in Gray and Black__
3. Klimt's *Frieze* dedicated to this composer features female embodiments of Gluttony, Unchastity, and Lust.
        Answer: Ludwig van **Beethoven**

13. Name each of the following poems of Alexander Pope for ten points each.
1. This 1717 work finds the poet visited by the shade of a woman "with bleeding bosom gored" because she acted "a Roman's part." It likens metempsychosis to distillation in lines twenty-five and twenty-six.
        Answer: "Elegy to the **Memory of an Unfortunate Lady**"
2. This work is in four Epistles, the second of which begins "Know then thyself, presume not God to scan / For the proper study of mankind is" the titular subject.
        Answer: An __Essay on Man__
3. This work has gained fame in its own right as the prologue to Pope's imitation of the Satires of Horace. It attacks Edmund Curll and Grubstreet authors, likening them to Pitholeon and Codrus.
        Answer: "**Epistle to Dr. Arbuthnot**: Being the Prologue to the Satires"

14. Answer each of the following about a splintering in a major American political party for ten points.
1. Disillusioned by the massive corruption of the first Grant administration, this reformist insurgency in Grant's party held a convention in Cincinnati, Ohio in May, 1872.
        Answer: the **Liberal Republican** Party (or **Liberal Republican**s)
2. This founder of the *New York Tribune* ran as the candidate of the Liberal Republican Party in the election of 1872.
        Answer: Horace **Greeley**
3. Part of the impetus for the Liberal Republicans came from this Massachusetts Senator, who was removed from the chair of the Foreign Relations Committee in 1870, probably due to Grant machinations.
        Answer: Charles **Sumner**

15. Answer each of the following about an important class of biological molecules for ten points.
1. These macromolecules important in second messenger chains are named for their exchange of their namesake nucleotide's diphosphate for its triphosphate. Cholera is caused by permanent activation of one.
        Answer: **g**uanine nucleotide binding **protein**s (or **g**uanine **t**ri**p**hosphate**ases**)
2. Name either of the two researchers who received the 1994 Nobel Prize in Medicine for their hypothesis and discovery of g proteins.
        Answer: Martin **Rodbell** or Alfred Goodman **Gilman**
3. This important family of proto-oncogenes implicated in about a quarter of all human cancers encodes for a small g protein which is especially important for its activation of the MAP kinase pathway.
        Answer: **Ras**

6. Name the battle thirty, twenty, ten.
1. (30 points) The second of these battles occurred on May 2, 1813 and saw Blucher and Wittgenstein draw a stalemate and withdraw. It was followed by the Battle of Bautzen.
2. (20 points) In the first battle named for this town, a ditch lined with Schwedenstein's musketeers and artillery under Brahe were unable to prevent Pappenheim's charge from routing the Protestant left wing.
3. (10 points) In this 1632 battle of the Thirty Years' War, Gustavus Adolphus rallied his troops and reserves under Ohm to victory with a charge parallel to the line, but was mortally wounded in the process.
      Answer: **Lützen**

7. Answer each of the following about some mythological dudes saved from death by their connections for ten points.
1. When Zeus blasted Semele with thunderbolts, he saved this unborn son by sewing him up in his thigh.
      Answer: **Bacchus** (or **Dionysus** or **Liber**)
2. This woman's fate was sealed when she cheated on Apollo with Ischys. Apollo saved Asclepius from the fire in which her dead body was consumed.
      Answer: **Coronis**
3. *The Iliad* recounts that Aphrodite rescued Aeneas after this Argive hero crushed his hips with a boulder.
      Answer: **Diomedes**

8. Answer each of the following about a certain Muslim dynasty for ten points.
1. The second great Caliphate, this dynasty took-over after the 750 CE defeat of Marwan II at the Battle of the Great Zab River.
      Answer: **'Abbasid** dynasty (or **'Abbasid**s Caliphate or **'Abbasid**s; prompt on "Baghdad
          Caliphate")
2. Establishing the initial 'Abbasid capital at Al-Anbar, this first Caliph was notable for the brutality of his purges, which he acknowledged by taking an epithet meaning "the blood-shedder."
      Answer: **Abu** al-'Abbas as-**Shaffah** (accept either underlined part)
3. This able *mawali* organizer of the 'Abbasid revolt and governor of Khorasan was the real power in the early 'Abbasid Caliphate. He was assassinated at the behest of Abu's brother al-Mansur in 755.
      Answer: **Abu Muslim**

9. Name each of the following about a short story by Edgar Allen Poe for the stated number of points.
1. (5 points) As this work opens, the narrator Montresor notes that he seeks revenge for "The thousand injuries of Fortunado."
      Answer: "The **Cask of Amontillado**"
2. (15 points) This Latin phrase is the Montresor motto and matches their arms, an angry snake biting a golden foot that is stepping on it.
      Answer: *Nemo me impune lacessit*
3. (10 points) Montresor entraps Fortunato by twice offering to send for this fellow wine connoisseur, whom Fortunato claims is an "ignoramus" who "cannot tell Amontillado from Sherry."
      Answer: **Luchesi**

10. Answer each of the following about a massively useful technique from physics for ten points.
1. If r is the distance from a point, the potential due to charge at that point drops-off like this with r, classically.
      Answer: **one-over-r** (or **r-to-the-minus-one** or other equivalents)
2. These two-parameter orthonormal functions are proportional to associated Legendre functions times imaginary exponentials. Their completeness allows them to represent any function on the surface of a ball.
      Answer: **spherical harmonic**s (prompt on "Y^l_m")
3. The potential of a localized charge distribution can be expanded in spherical harmonics as a series in powers of one-over-r. Such an expansion is known as this, after the physical meaning of its coefficients.
      Answer: a **multipole** expansion

1. Name each of the following twentieth-century American operatic composers for ten points.
1. This dude created the one-act jazz opera *Blue Monday* and worked with his brother Ira on the "American Folk Opera" *Porgy and Bess*.
        Answer: George **Gershwin** (or Jacob **Gershvin**)
2. This guy collaborated with Gertrude Stein on *Four Saints in Three Acts* and *The Mother of Us All*.
        Answer: Virgil **Thomson**
3. This man set *Of Mice and Men* in 1970 but, unfortunately, allowed Broadway to influence his 1981 setting of *All The Kings' Men*, *Willie Stark*. The title role of his *Susannah* is a favorite of Renee Fleming.
        Answer: Carlisle **Floyd**

2. Answer each of the following about combustion and a thermodynamic cycle for ten points.
1. The maximum theoretical work obtainable from a combination of a combustion system and reference environment is known as this. Its value for liquid octane in air is about 47 megajoules per kilogram.
        Answer: chemical **exergy** (or **availability** or **available energy**)
2. Use of the exergy as a heat source in an air standard analysis allows one to model a combustion-turbine system by this thermodynamic cycle, which consists of alternating isentropic and isobaric steps.
        Answer: the **Brayton** cycle
3. For the Brayton cycle, this is given by one minus one over the pressure ratio to the adiabatic ratio. It is, in general, the ratio of work out to energy in and is maximized for a Carnot cycle.
        Answer: the thermal **efficiency**

3. Answer each of the following about a short story for ten points.
1. In this work of Bret Harte, the sluice robber Uncle Billy betrays the titular group.
        Answer: "The **Outcasts of Poker Flat**"
2. This gambler is the main character of "The Outcasts of Poker Flat." In the end, he writes a suicide note on the deuce of clubs and puts a Derringer bullet in his heart.
        Answer: John **Oakhurst**
3. This whore joins Mother Shipton in being kicked-out of Poker Flat along with Oakhurst. She and Piney eventually freeze to death in each other's arms.
        Answer: the **Duchess**

4. Answer each of the following about a certain psychological phenomenon for ten points.
1. C fibers carry the chronic, dull variety of this unpleasant phenomenon to the spinal cord, whence it is transmitted to the cingulate cortex *via* the thalamus.
        Answer: **pain**
2. These other types of peripheral nervous system fibers carry sharp pain.
        Answer: **A-delta** fibers
3. This 1965 theory of Melzack and Wall states that pain can be cut-off at the PNS-spine interface. Its neurological mechanism is the inactivation of C and A-delta fibers by serotonin and endorphins.
        Answer: **gate** control theory

5. Answer each of the following about a series of video games for ten points.
1. Boxing kangaroo Roger is a recurring character in this series of 3-D fighters centering on the namesake King of the Iron Fist Tournament. Its *Tag Tournament* included an amusing bowling mini-game.
        Answer: *Tekken*
2. *Tekken* is a product of this game company best known for bringing you *Pac Man*.
        Answer: **Namco**
3. This old dude with bowl-shaped hair is in some sense the main character in Tekken. He drops his son Kazuya from a helicopter at the end of *Tekken II* and appears in a mawashi as the final boss of *Tekken IV*.
        Answer: **Heihachi** Mishima (prompt on "Mishima")

18. These are named according to Rule D-7.1. The structure of these chemicals is given empirically by Wade's rules, but understanding their structure *a priori* requires a three-center-two scheme or similar modification to covalent theory; this gives rise to closo-, nido-, and arachno- structures. First characterized by the work of Alfred Stock, these compounds must be separated in high vacuum due to their flammability; this is especially true of the simplest di- variety, which Stock first isolated and studied by analogy to ethane. For ten points, name this class of chemical compounds comprised of the molecular hydrides of boron.
        Answer: **borane**s (prompt on "boron hydrides")

19. Arthur Symons likens this person's technique to the juggling billiard balls in an 1898 analysis of "Walter Schnaffs' Adventure & Two Friends." Artine Artinian is probably the foremost modern translator of this author; his 1955 edition includes "Who Knows?" but not the novels *A Woman's Life*, *Pierre and Jean*, or *Bel-Ami*. Titular stories from works issued in this writer's own lifetime include a story of regretted adoption near the Bois de Boulogne, "Monsieur Parent," and "Mademoiselle Fifi," which is set in the aftermath of the Franco-Prussian War. For ten points, name this author of "The Piece of String," "Ball of Fat," and "The Necklace;" a French naturalist best known for his prolific output of short stories.
        Answer: Henry-René-Albert-Guy de **Maupassant**

20. Originated as an improvement on the method of Guo and Kemphues to control par-1 in *C. elegans*, this process was first carried out for planaria in by Newmark and Sanchez in 1999. One step of this process ends with the creation of silencing complexes from the so-called small elements created by Dicer from a long double-stranded form of the namesake substance. Partially analogous to the anti-sense technique, this technique was discovered by Fire, Mello, *et al.* in 1998, a fact that won them the 2006 Nobel Prize in Medicine. For ten points, name this important method of knockdown named for its use of a certain genetic material to prevent expression of a gene.
        Answer: **r**ibo**n**ucleic **a**cid **i**nterference (prompt on "interference" or "gene knockdown" before "namesake substance")

21. The first part of the Ketuvim in the NAS ordering, this is the section of the Megillot appropriate for Shavuot. This work explains the meaning of an exchange of sandals, which is evidence that it was written after the events it describes, while the lineage at the end of chapter four dates it to the reign of David. After Mahlon and Chilion die at the beginning of this book, Naomi is accompanied back to Judah by two Moabitesses, one of whom gleans in a field. For ten points, name this book of the Old Testament in which the titular woman marries Boas; a short book situated between Judges and First Samuel.
        Answer: The Book of **Ruth**

12. One side in this clash began by marching to Dust Hill Farm southeast along a turning road. An initial charge by the aggressors' right wing past Sulby Hedge to Red Hill Farm broke the defenders' left under Oakey and Ireton, but over-pursuit of this advantage toward the namesake town allowed the defenders' right wing to route Langdale's horse and Astley's foot, which comprised the Royalist left and center. The field commanders never met as Rupert's charge allowed Cromwell to capture about 3,500, and neither Charles I nor Fairfax took the field. For ten points, name this June 14, 1645 battle; a decisive English Civil War victory for the Parliamentarians and the first real test of the New Model Army.
        Answer: the Battle of **Naseby**

13. This person addresses Andrea who lives in an apartment in Suipacha Street in "A Letter to a Young Lady in Paris." This author's early poetry and criticism can be found in *Around the Day in Eighty Worlds*. A group of lottery entrants who receive a cruise but are not allowed to express curiosity about its destination are the subject of this writer's novel *The Winners*. *All Fires the Fire*, *The End of the Game and Other Stories*, and *62: A Model Kit* contain his short fiction, which was the basis for Antonioni's *Blow-Up*. For ten points, name this novelist best known for *A Manual for Manuel* and *Rayuela* or *Hopscotch*; a contemporary Euro-Argentine.
        Answer: Julio **Cortázar** (or Julio **Denis**)

14. Responsible for the San Fernando massacres, this person's support of Atanasio Aguirre proved futile. After elevation to Minister of War, this leader nominally served as his father Carlos Antinio's vice president for a time after the latter's death. Killed at Cerro Corá, this lover of Eliza Lynch began the chain of events that proved his undoing by seizing the *Marquês of Olinda* and the province of Corrientes. For ten points, name this dictator best known for leading Paraguay to ignominious defeat in the War of the Triple Alliance.
        Answer: Francisco Solano **López**

15. A notable *St. Anne* is on the tremeau of this structure's central portal. Niche sculptures in extremely high relief adorn the six buttresses behind its main entrance. Built in part to house the *Voile de la Vierge*, this building finds the seven liberal arts depicted on the archvolts of the right portal of the west façade, near the *Life of the Virgin* sculpture on the tympanum. This cathedral's forty-three foot north rose was completed around 1220, but the *Notre Dame de Belle Verrière* is probably the most notable of its almost four thousand stained glass windows. For ten points, name this cathedral that has a three hundred seventy-seven foot north spire and that joins Rheims and Amiens among the pinnacles of the French gothic.
        Answer: Notre-Dame de **Chartres**

16. The year of this person's retirement, his former team went from 59-23 to 38-44, first to worst. This player was notable for his fights with Bob Cousy, whose misuse of his skills prevented their team doing better than ten games below .500 in the two years that Cousy coached him. A trade to the Bucs late in his career allowed this alumnus of Crispus Attucks High School to team with Lew Alcindor to win the 1970 NBA title, but he is best known for his time with the Royals and Bearcats in Cincinnati. For ten points, name this basketball player best known for averaging a triple-double in the 1961-62 season; a guard nicknamed "The Big O."
        Answer: Oscar Palmer **Robertson**

17. This person's capture and execution were caused by a refusal to act following a solar eclipse. This leader's expedition to Minoa allowed the creation of a highly effective naval blockade, while his Sphacterian ploy caused the capture of a large number of enemies. A participant in the ostracism of Hyperbolus, this politician rose to prominence by using the wealth of his silver mines, causing Plutarch to pair him with Crassus. The death of Lamachus and recall of Alcibides left this Athenian in charge of the Sicilian expedition, on which he died. For ten points, name this Athenian politician and general best known for negotiating his namesake peace to create a lull in the Peloponnesian War in 421 BCE.
        Answer: **Nicias**

6. A 2000 Richard Allen essay compares the post-colonial dimensions of Naipaul's *The Enigma of Arrival* to those of this work. The seminal critical work about this work is John Russell Taylor "[It] and After," which calls it "the revolution." A scuffle at the middle of this play's Act I causes the female lead to burn her arm on an iron, after which she has a conversation about "avert[ing] the situation," i.e. aborting the child that she is carrying. That child is eventually miscarried at Colonel Redfern's house, which Helena Charles discovers when she is told so in Act III by Alison, who is compelled to speak over the main character's jazz trumpet. For ten points, name this play set in the Midlands flat shared by Cliff Lewis and Jimmy Porter; the best-known work of John Osborne.
        Answer: ***Look Back in Anger***

7. This work was originally introduced by the essay "The Paralysis of Criticism," which attempts to explain its vacillation between hope and apparent hopelessness. A weak point in this book's thesis is its lack of an effective mechanism for the "program of science" as it posits only the obtuse "repressive desublimation" as allowing instrumentalism to give rise to the central condensation. The final chapter of this book's second section discusses "Positive Thinking," which is the namesake type of philosophy, while the namesake being arises when people are forced to measure themselves only along the axis of material accomplishment. For ten points, name this seminal 1964 work, the best-known of Herbert Marcuse.
        Answer: ***One-Dimensional Man***

8. Jahn's 1999 *Critical Companion* to this work cites Sorokin's "Cruel Joke" essay on the protagonist "as Jonah." The main character is thrilled to dance with the sister of the "Bear my Burden" society's founder when he holds a ball, the leftover cakes from which cause a bitter quarrel. Peter Ivanovich learns of the title character's screaming from the servant Gerasim. As this story opens, a group of colleagues note from the *Gazette* that the central event has occurred during a lull in the Melvinski trial. For ten points, name this novella in which the title demise occurs after a law clerk injures himself hanging a curtain; perhaps the best-known short work of Leo Tolstoy.
        Answer: The ***Death of Ivan Ilyitch*** (or ***Smert Ivana Ilicha***)

9. A recent algorithm Boyer and Myrvold provides a linear-time test for this property. The existence of an algebraic dual is sufficient for this property according to Whitney's criterion. This property's namesake left-right testing algorithm utilizes the Fraysseix-Rosenstiehl criterion for it. Wagner's theorem states that objects with certain classes of forbidden minors cannot have this property; these classes are K_5 and $K_{3,3}$, the subgraphs forbidden for a graph with this property by Kuratowski's theorem. Euler's theorem applies to graphs of this type. For ten points, name this property of graphs that can be embedded on a flat two-space surface such that no edges intersect.
        Answer: **planar**ity

10. Donald Redford *History and Chronology* of this phase contains an important re-evaluation of its fifth ruler, who shunned the "mighty bull" epithet. Resheph and Astarte first gained traction during this period, the last ruler of which, Horemheb, is notable for appropriating his successors' monuments. Succeding the Second Intermediate Period, this dynasty is generally considered the first of the New Kingdom and was followed by the so-called Ramesside period about three hundred years after its founding by Ahmose. For ten points, name the Egyptian dynasty that fought the Battle of Megiddo under Thutmose III and that also featured Amenhotep III, Akhenaton, Tutankhamen, and Hatshepsut.
        Answer: the **Eighteenth Dynasty** of Egypt

11. This work opens with a Mayakovsky quote about "mammals / of a different breed." Its twelfth chapter begins after the protagonist avoids Judas by fleeing Garbos and then falls in with Ewka, whom he loves until he catches her copulating with a goat. In this book, Stupid Ludmilla is killed by the breaking of a bottle of manure inside of her vagina and mourned by Lekh, the creator of the title creatures, which are always torn to pieces by their fellows. Opening in Marta's hut, this novel's nameless protagonist is eventually taken-in by Soviets and cured of his muteness. For ten points, name this novel that follows a young refugee's journey across war-torn Poland; the best-known work of Jerzy Kosinski.
        Answer: The ***Painted Bird***

The Illinois Open 2006: Spite Burn
Tossups by Illinois (Mike Sorice)

1. Several works from this location are attributed to Hephastion and Epigonos, the latter being the master of its so-called First School. The greatest work of this locale's Second School was reconstructed starting in 1873 and erected in its namesake Museum in Berlin; the frieze from that monument contains the vignettes known as *Zeus Hurling Thunderbolts* and *Athena Slaying the Giant*. This city's monuments *Gaul and His Wife* and *Dying Gaul* are known only in Roman marble copies, but were commissioned in bronze by Attalus Soter; however, its greatest sculptural splendor has been reconstructed as the *Altar of Zeus*. For ten points, name this Mysian city known for creating many of the major works of Hellenistic sculpture.
    Answer: **Pergamon** (or **Pergamum**)

2. The power shape may be optimized in terms of this property by means of a Fredholm integral equation containing the absorption cross-section in its kernel; this property is then an eigenvalue of the Fredholm operator. Minimized for an assembly with gradient-free scalar flux on its boundary, this property may be determined for a homogeneous system by selecting the zero-constant separation solution of the diffusion equation for the neutron density, then solving in terms of size factors. The fission cross-section is proportional to this property, which is minimized for a reflected sphere of pure fuel. For ten points, name this property of a nuclear reactor; the weight of fuel required to sustain a chain reaction.
    Answer: **critical mass**

3. A recurring blue conical cap rests under a chair near a child on the floor and a woman in a red bustier adjusts her hair in a mirror in this person's *Family Picture*. A greenish self-portrait of this artist is cut with a knife in *Birds' Hell*, while two blonde figures are separated by a black sword in this painter's *Brother and Sister*. Following *Departure*, he focused on triptychs like *The Actors*, *Carnival*, *Blindman's Bluff*, and *Argonauts*, which he completed the day he died in 1950. *Black Irises* is exemplary of this expressionist's fascination with flowers, while his numerous self-portraits include ones *in Blue Jacket*, *with Horn*, *with Saxophone*, and *in Tuxedo*. For ten points, name this German expressionist best known for *The Night*.
    Answer: Max **Beckmann** (prompt on "*Family Picture*" before "person")

4. These objects are conventionally governed by equations with inhomogeneous terms known as collisional time partials. They may be obtained by ensemble averaging the Klimontovich phase density. For a mu-space, the velocity-space divergence theorem is of great utility in taking the moments these mathematical functions as they must vanish at the boundaries of the velocity space. The number density may be given by the zeroth velocity moment of one of these, while higher-order moments of their governing equations yield conservation laws. For ten points, name these mathematical objects fundamental to statistical mechanics that give the probability of finding a particle within a differential volume of phase space and symbolized *f*.
    Answer: **distribution function**s (prompt on "*f*")

5. The mechanism of this work's central concept is the subject of the second essay in Scheler's *Collapse of Values*. Spencer is attacked in the third section of this book and Kauffman's introduction discusses the reasons for the author's use of a French word for the central concept, *ressentiment*. The blonde beast first appears in the eleventh section of this book, which takes the form of three inquiries; these include "What is the Meaning of Ascetic Ideals?" and "'Guilt,' 'Bad Conscience,' and the Like." For ten points, name this 1887 work declared "A Sequel to… *Beyond Good and Evil*;" a work of philosophy in which Friedrich Nietzsche seeks to uncover the origin of manners and ethics.
    Answer: *On the **Genealogy of Morals**: A Polemic* (or *Zur **Genealogie der Moral**: Eine Streitschrift*)