

Northern Kentucky Academic League

6th Grade Match- Week 1

6— 145

1. Identify the hyphenated nickname given to a gold seeker who arrived in California in 1849.

FORTY-NINER

2. Name the most famous American folk hero who was a very strong lumberjack.

(PAUL) BUNYAN

3. Which country has the oldest continuous civilization? It has as its capital Beijing.

CHINA

4. This German Romantic composer was known for his symphonies, concertos, songs, and chamber music. Identify this 19<sup>th</sup> century composer known for *A German Requiem* and the famous "Lullaby."

(JOHANNES) BRAHMS

5. What is the greatest common factor of 16 and 15?

1

6. Which literary term refers to a direct comparison of two things that are unlike but resemble in one way?

METAPHOR

7. How many millimeters does it take to make a meter?

1,000

8. Anything that has mass and takes up space is known as what?

MATTER

9. A homeless girl is taken as an apprentice by a midwife in the Middle Ages in which 1996 Newbery Medal winner written by Karen Cushman?

THE MIDWIFE'S APPRENTICE

10. Which country of Scandinavia is the most northern? It has as its capital Oslo.

NORWAY

11. A little tree that was unhappy in the forest and that longed for a moment of glory is told in *The Fir Tree* and was written by which famous fairy tale author? (HANS CHRISTIAN) ANDERSEN

12. This French impressionist suffered from rheumatoid arthritis. Name this famous painter whose works included *The Luncheon of the Boating Party* and *The Theater Box*.

(PIERRE) RENOIR

13. Solve for  $a$  in the following equation:  $4/5a = 80$ .

$a = 100$

14. Literally meaning *in the church style*, what musical term is given to choral music without any accompaniment?

A CAPELLA

15. Give the name of the 15<sup>th</sup> century explorer for whom the continents of the western hemisphere were named.

(AMERIGO) VESPUCCI

16. Joe rides his bike 3 miles to the store and passes Tom's house on the way. If Tom lives 0.7 miles from the store, how far does Joe live from Tom?

2.3 MILES

17. What is the sprouting of a seed into a new plant?

GERMINATION

18. This question requires a multiple answer. In the sentence, "She will study for her test tonight," give the verb and its tense.

WILL STUDY, FUTURE (TENSE)

19. Introduced by Alexander Calder in the 1930s, identify this type of sculpture in which objects are hung and balanced so that they are moved by currents of air.

MOBILE

20. He was a Texas hero and leader of the Americans in Texas who opposed Mexican rule. Identify this colonel in the Texas revolution who died at the Alamo. According to legend, he invented the knife that bears his name.

(JAMES) BOWIE

21. The birthday cake was cut into 10 pieces. If 4 of the pieces were left, what fraction was eaten?

$3/5$

22. This book concerns a black sharecropper, his family, and the devotion of a coon dog. Identify this Newbery Medal winner by William Armstrong.

SOUNDER

23. What is the smallest state in area? It has as its capital Providence.

RHODE ISLAND

24. Jon found a sale on books. If he bought 6 books for \$3.25 each, how much did he spend?

\$19.50

25. Give the term referring to a scientist who studies earthquakes and their phenomena.

SEISMOLOGIST

26. Identify the French sculptor known for his statue *Lafayette in America* but probably better-known for *Liberty Enlightening the World* which is more popularly known as *Statue of Liberty*.

(FREDERIC) BARTHOLDI

27. What is the movement of electrons along a path?

CURRENT

28. What is the sentence which contains the main idea of a paragraph?

TOPIC (SENTENCE)

29. If the radius of a circle is 75 centimeters, find its diameter.

150 CENTIMETERS

30. In 1903 the Wright Brothers made the first engine-powered, heavier-than-air flight in which town in North Carolina?

KITTY HAWK

31. In the sentence, "His bare arms were quite cool," give the correct spelling of *bare*.

B A R E

32. *The Legend of Sleepy Hollow* has inspired many movies and cartoons for younger audiences. Give the name of the author of the original tale *The Legend of Sleepy Hollow*.

(WASHINGTON) IRVING

33. The Greek Parthenon was built to honor which goddess?

ATHENA

34. What giant construction project was built to keep invaders out of China?

GREAT WALL

35. In the sentence, "Her coat was found down the hall by Joe's locker," identify the case of the pronoun.

POSSESSIVE (CASE)

## SECOND HALF

1. If a square has one side measuring 33 meters, find its perimeter.

132 METERS

2. It is a portrait of the young Jonathan Buttall. Name this painting known for its particular coloring painted by Thomas Gainsborough.

(THE) BLUE BOY

3. Known as the "Emerald Isle," identify this country having Dublin as its capital.

IRELAND

4. What is the nonliving solid matter that is neither animal nor plant that comes from the Earth?

MINERAL

5. Which literary term is used when the writer uses such words as *buzz*, *sizzle*, *click*, and *crunch* in their writing to stress the sounds needed in the writing?

ONOMATOPOEIA

6. If one angle of a triangle measures  $12^\circ$  and the other measures  $34^\circ$ , find the measure of the third angle.

$134^\circ$

7. Give the 2-word term for the sudden and extensive change from muscle power to machine power that began in 18<sup>th</sup> century England.

INDUSTRIAL REVOLUTION

8. Give the name of the planet located nearest to Earth.

VENUS

9. *The Hobbit*, *The Fellowship of the Ring*, *The Two Towers*, and *The Return of the King* are all part of which series of books written by J. R. R. Tolkien?

THE LORD OF THE RINGS

10. Identify the American composer of "White Christmas" and "God Bless America."

(IRVING) BERLIN

11. When a scientist reaches a conclusion after examining and recording evidence, what is the name for his explanation?

THEORY

12. In which quadrant is the point  $(-2, 8)$  found?

2<sup>ND</sup> (QUADRANT)

13. Name the mythical Greek warrior whose mother dipped him into the River Styx to protect him from injury but who later died when shot in his heel – the same heel by which his mother had held him.

ACHILLES

14. On Billy's tests he scored a 90, 85, 83, 85, and 90, find the mode score.

85

15. This state has the smallest population. Identify the state having Juneau as its capital.

ALASKA

16. This question requires a multiple answer. Name 2 of the 3 main countries who claimed the New World.

SPAIN, FRANCE, &/OR ENGLAND (ANY 2)

17. What is the top layer of the Earth?

CRUST

18. Which writing term refers to the time and place of the story?

SETTING

19.  $\frac{5}{6}$  of the 24-member class passed the test. How many did not pass the test?

4

20. Which drama term refers to the group of characters in a play?

CAST

21. Give the name of the supreme Greek god.

ZEUS

22. Identify the state of matter that takes up a definite amount of space but has no definite shape.

LIQUID

27. Which country of Europe lies on the Jutland Peninsula? It has as its capital Copenhagen.

DENMARK

28. The Scarecrow, the Tin Woodman, the Cowardly Lion, Dorothy, and Toto are all characters in *The Wonderful Wizard of Oz* written by which author?

(L. FRANK) BAUM

29. If Sam filled  $\frac{2}{3}$  of a 6-liter container with milk, how many liters of milk is that?

4 (LITERS)

30. Identify the error illustrated by the following: Walking down the hall with the principal beside her."

(SENTENCE) FRAGMENT

31. Name the author of *Alice's Adventures in Wonderland*.

(LEWIS) CARROLL or (CHARLES) DODGSON

32. Give the mathematical term referring to the distance around an object.

PERIMETER

33. Convert 133 centimeters into meters.

1.33 (METERS)

34. Which unit measures the loudness of sound?

DECIBEL

35. This question requires a multiple answer. Name the city and state that has been called "the Cradle of Liberty."

BOSTON, MASSACHUSETTS

## EXTRA QUESTIONS

1. Give the name of the inventor of barbed wire.

(JOSEPH) GLIDDEN

2. Jean Valjean, a parolee, changes his name to Monsieur Madeleine and has risen to become both a factory owner and Mayor. Identify this musical that tells about the trials of Valjean's life.

LES MISERABLES

3. This question requires a multiple answer. In the sentence, "He was chosen to be captain by the team," identify the verb and its voice.

WAS CHOSEN, PASSIVE (VOICE)

4. Simplify the following:  $4mn - 8mn$ .

$-4mn$

5. The stages of growth and change of an organism's life is known as what?

LIFE CYCLE





**Northern Kentucky Academic League  
JV Match- Week 6**

1. A number is divisible by 6 if it is also divisible by which two positive prime numbers?

2 AND 3

2. Allegedly, this art movement received its name when a knife stuck into a dictionary landed on the French word for "hobby-horse." A reaction against the brutality and destruction of World War I, it showcased artists like Man Ray and Marcel Duchamp [doo-SHAHM(p)]. Name this "anti-art" movement associated with *Nude Descending a Staircase, No. 2*.

DADA(ISM) (Accept: DADA(IST) and other word forms)

3. Bronze is the oldest known of these amalgams. From the Latin for "to bind," these substances are made by mixing and fusing two or more metals, or metals with non-metals. What kind of metallic combinations also include steel and brass?

ALLOY(S)

4. Full name please. This politician is the father of Kentucky's junior Senator. He served as a gynecologist in Texas before running several times for Congress and the presidency. Name this politician, an influential Tea Party member and Libertarian.

RON PAUL

5. In this novel, Beth contracts scarlet fever, and Meg becomes engaged to Mr. Brooke, Laurie's tutor. Amy burns Jo's manuscript, and Jo almost lets Amy drown while ice skating. Name this portrait of the March family, written by Louisa May Alcott.

LITTLE WOMEN

6. A job as director of West Texas State Normal College's Art Department influenced the landscape work of this artist. Those works include paintings such as *Canyon Country* and *Red and Yellow Cliffs*. What American modernist is best known for her depictions of New Mexico and bleached bones?

(GEORGIA) O'KEEFFE

7. An arithmetic sequence has first term 12 and last term 132. If the common difference is 8, how many terms are in the sequence?

16

8. Before turning to young adult fiction, this writer published *Sounds and Silences: Poems for Now* and *Leap into Reality: Essays for Now*. His 1998 novel about Joey and Mary Alice Dowdel, *A Long Way from Chicago*, won a Newbery Honor. Which author earned the 2001 Newbery Medal for *A Year Down Yonder*?

(RICHARD) PECK

9. Clear the airway of any debris. Then tilt the chin back and pinch the nose. Alternate 3 breaths with 3 sharp pressing motions three finger widths below the sternum. This is a partial description of what basic first aid technique?

CPR (Accept: CARDIO PULMONARY RESUSCITATION)

10. This body of water abuts the city of Chicago. It is the 'M' in the mnemonic [nuh-MON-ik] 'HOMES,' and shares its name with a state it borders. Give the only Great Lake entirely within the United States.

(LAKE) MICHIGAN

11. A *Pall Mall Gazette* story about this discovery stated, "You can see other people's bones with the naked eye; on the revolting indecency of this there is no need to dwell." What type of radiation did Wilhelm Roentgen discover in 1895?

X-RAYS

12. As a young man, this artist was commissioned to complete Bologna's (ba-lone-YAS) Tomb of St. Dominic. He also worked on numerous sculptures and designs for Pope Julius the Second's tomb. Name this artist, whose other works for the papacy included decorating the ceiling of the Sistine Chapel.

MICHELANGELO (DI LODOVICO BUONARROTI SIMONI)

13. Betty's checking account started with a balance of \$108. She deposited \$75 and wrote a check for \$38. What is the balance of Betty's checking account after these transactions?

\$145

14. Cities along this river include Cairo [KYE-roh] and Alexandria. It has two major tributaries, the White and the Blue. Identify the world's longest river, which was Ancient Egypt's lifeblood.

NILE (RIVER)

15. In this novel, a St. Bernard-sheepdog mix travels from California's Santa Clara Valley to the Klondike. The dog protects his master, John Thornton, from drowning and attacks, but leads a wolf pack after John dies. Name this 1903 novel by Jack London.

(THE) CALL OF THE WILD

16. A major constituent of the embryonic [em-bree-ON-ick] and young vertebrate skeleton, this material is converted largely to bone with maturation. It is a tough, elastic, fibrous connective tissue found in various parts of the body, such as the joints, outer ear, and larynx. Give the technical term for what is sometimes known as gristle.

CARTILAGE

17. A pair of shoes that originally was marked \$120 was on sale 25% off. If 6% sales tax is then added on to the cost, what is the final purchase price for the pair of shoes?

\$95.40

18. A saxophonist's left thumb is used to press the key that raises its pitch by this interval. In sheet music, the notation "8va" [eight vee ay] instructs the performer to play the music in an interval higher than written. What musical term describes the interval between a note and the next higher or lower instance of that same note?

OCTAVE (Accept: OCTAVO or OCTAVE (KEY) or (ONE) OCTAVE (HIGHER))

19. An example of this type of location is coordinates. Unlike relative position, it does not depend on any other location. Identify this objective type of location.

ABSOLUTE (LOCATION)

20. Books in this series include The Penultimate Peril, The Hostile Hospital, and The Grim Grotto. It follows Violet, Klaus, and Sunny Baudelaire [BODE-lair] as they run from their evil cousin, Count Olaf. Identify this series by Daniel Handler, better known as Lemony Snicket.

(A) SERIES OF UNFORTUNATE EVENTS

21. A cat's heartbeat can beat as fast as 220 beats per minute when excited. If a cat's heart was to beat this fast for 12 minutes, how many beats would this be?

2,640 (HEARTBEATS)

22. A Sibert Medal-winning book describes this NASA mission, in which 400,000 People Landed the title spacecraft on the Moon. On July 21, 1969, two of its astronauts--Buzz Aldrin and Neil Armstrong--became the first humans to set foot on the moon. Name this mission, during which Armstrong proclaimed, "One small step for man, one giant leap for mankind."

APOLLO 11

23. According to the Torah, this ethnic group of people descends from Jacob. They were said to have wandered around Sinai [SIGH-nigh] for forty years before conquering and settling in Palestine. Name this ethnic group that practiced Judaism.

HEBREWS (Accept: ISRAELITES) (Not: JEWS)

24. He wrote eight books of Songs Without Words for solo piano. A visit to the British Isles inspired his Scottish Symphony and Hebrides [HEB-rih-deez] overture. Name this composer who also wrote an overture to Shakespeare's A Midsummer Night's Dream, and whose sister Fanny was also a composer.

(FELIX) MENDELSSOHN [MEN-dul-sun] (BARTHOLDY [bar-tawl-DEE])

25. Idaho is the leader in using geothermal energy, which falls under this category. Plants like bamboo are also included, because once the stalks are harvested for use, they will grow back. Name the adjective that refers to resources like solar, wind and hydroelectric, which are replenished and can be used again.

RENEWABLE (RESOURCES)

26. A car equipped with air bags crashes into another object. Give the word for the sudden decrease in speed, occasionally measured in feet per second per second, which allows the air bags to deploy.

NEGATIVE ACCELERATION OR DECELERATION

27. A given square has an area of 32 square feet. If the lengths of the sides of the square are doubled, what is the area of the new square, in square feet?

128 (SQUARE FEET)

28. A lesser known ballet by this composer is his Dance Panels of 1959. One better known ballet includes selections such as "Corral Nocturne" and "Hoe-Down," while another is a musical version of the tale of a Wild West outlaw. Name this American composer of Rodeo and Billy the Kid.

(AARON) COPLAND [COPE-lund]

29. Along with Crassus [CRA-shus] and Pompey [POM-pee], this leader was a member of the First Triumvirate [try-UM-ver-it]. He conquered Gaul and invaded Britain before crossing the Rubicon and being proclaimed dictator in perpetuity. Give this Roman general and statesman who was assassinated on the Ides of March.

JULIUS (CAESAR) (Not: CAESAR)

30. Along with Thoreau [THOHR-oh], this man led the Transcendentalist movement. He fathered free verse and published a collection titled "Leaves of Grass." Who wrote the poem "O Captain! My Captain!"?

(WALT) WHITMAN

31. A prism has a base that has N sides. How many vertices will the prism have?

2N

32. About 80 percent of all plant and animal species are native to this nation. Perhaps one of its most famous animals is the lemur. Name this country, which shares its name with a movie franchise and animated television show.

MADAGASCAR

33. He was born about A.D. 570 in Mecca. A unifier of the Arab people, he received divine revelations which were compiled into the Qur'an [koo-RAHN]. Name the prophet and founder of Islam.

MUHAMMAD (Accept clear equivalents)

34. His works include "The Rose Tattoo" and "Cat on a Hot Tin Roof". Name this American playwright who wrote "A Streetcar Named Desire."

(TENNESSEE) WILLIAMS

35. Professional models of this instrument often include an F attachment operated with the player's left thumb. The predecessor of this instrument was the sackbut. Name this member of the brass family, which is played by extending or retracting its long slide.

TROMBONE(S) (Accept answers that include trombone and descriptors like TENOR or BASS)

36. A circle has a diameter of length 12 units. In terms of pi, what is the circumference, in units, of the circle?

12 PI (UNITS)

37. At the time, this navigator was accused of stealing or sabotaging Columbus' glory and reputation. While Columbus believed the New World was part of Asia, this man showed that it was its own continent. Identify this explorer who gave his name to the Americas.

(AMERIGO [uh-MER-ih-goh]) VESPUCCI [veh-SPYOO-chee]

38. Bach wrote one of these chorale-based compositions, whose name comes from the Latin for "to sing," about coffee. During his first years in Leipzig [LAHYP-zig], Bach also wrote one each week for his Lutheran church. Identify this type of work, a multi-movement composition for choir and orchestra.

CANTATA(S)

39. During this step in the water cycle, water takes up energy from the surroundings and cools the environment. It is synonymous with the way sweat leaves our body to cool you down. Name this phase transition from liquid to gaseous state.

EVAPORATION (Accept other forms of the word)

40. In one short story, this author introduces Billy Weaver, a naïve seventeen-year-old boy whom the title landlady poisons. He turned to children's fiction with *Fantastic Mr. Fox*, *The BFG*, and *Matilda*. Identify the author of *James and the Giant Peach* and *Charlie and the Chocolate Factory*.

(ROALD) DAHL

**End of first half – begin Inquiry Period**

**2012-13 Governor's Cup Practice Questions  
Middle Grades – Round 1**

1. A 13 foot ladder is leaning against a building. If the ladder is on the ground 5 feet from the base of the building, how high up the building does the ladder reach? T  
12 FEET T HI
  
2. A ballet dancer keeps the heels on the floor when performing the half, or "demi," version of this movement. The heels lift off the floor and the dancer nears the floor in the "grand" [GRAHN(d)] type of it. Name this ballet movement, from the French for "bent."  
(DEMO or GRAND) PLIÉ [plee-AY] B STI
  
3. According to folktales, this character used the Great Lakes as his watering holes, and formed Minnesota's ten thousand lakes from his footprints. A snowstorm stained his coat its distinctive color, which remained after his lumberjack master thawed him out. Name this bovine companion of Paul Bunyan. T HI  
BABE (THE BLUE OX)
  
4. According to myth, Squanto [SKWAN-toh] practiced this farming method, using a fish for fertilizer. In it, the maize provides a vertical support for the beans, the beans provide the soil with nitrogen, and the squash prevents weeds from growing. Give this agricultural practice of planting three plants together, practiced by many Native Americans. B HI  
THREE SISTERS (OF AGRICULTURE) (Accept: COMPANION PLANTING)
  
5. At a distance of 8.6 light years, this star with a six-letter name is the alpha star in a binary pair. Found in the Canis Major constellation, it is the brightest star in the night sky. What star is also known as the Dog Star? T X  
SIRIUS
  
6. A set of 10 data items has a mean of 25. If every data item is increased by 20, what is the mean of the new data? T X  
45
  
7. As leader of a New World colony, this man declared that "he that will not work shall not eat." According to legend, the life of this head of Virginia Colony was spared by Pocahontas. Name this colonial governor who saved Jamestown from starvation. T SI  
(JOHN) SMITH
  
8. Classify the following sentence by structure. "Always make good choices."  
SIMPLE (SENTENCE) B X

9. One advanced move in this dance style is the "five wing," and its subtypes include "rhythm" and "swing." Its popularity soared with the 1920s rise of vaudeville acts dedicated to it. What dance style is associated with Leonard Reed, Gregory Hines, and Bill "Bojangles" Robinson?

TAP (DANCE) T (STI)

10. This scientific measure is commonly called thickness. It is the measure of a fluid's resistance to being deformed by stress. What word is related to the weight found on containers of motor oil?

VISCOSITY B X

11. "Minor" ones include a man who discussed the fall of Ninevah and another who is told the Chaldeans [kal-DEE-ahns] are divine vengeance. Besides Nahum and Habbakuk, another one leaves his apprentice his cloak as he is taken up to heaven in a chariot of fire. What word describes a person such as Elijah, a human messenger for a deity?

PROPHET(S) (Accept: (MINOR) PROPHET(S)) T (STI)

12. A bag of marbles has 20 marbles that are all either green or blue. If the probability of drawing a blue marble is three-fifths, how many green marbles are in the bag?

8 B X

13. After the retirement celebration was over, the teacher claimed she knew the faculty was planning something, but we all knew she was really surprised. The previous sentence is an example of what type of sentence that contains more than one independent clause and at least one dependent clause?

COMPOUND-COMPLEX (SENTENCE) T ST X

14. Along with John Jay and James Madison, this statesman authored the Federalist Papers. He later became leader of the Federalist Party, and was instrumental in establishing a national bank. Identify the first Secretary of the Treasury of the United States, who was shot and killed in a duel with Aaron Burr.

(ALEXANDER) HAMILTON T

15. Born as Edwin in 1930, he legally changed his name in 1982 to his popular nickname. Along with Michael Collins and Neil Armstrong, he was one of the first astronauts to receive the Presidential Medal of Freedom. Name the second man to set foot on the moon.

(EDWIN "BUZZ") ALDRIN T (HI)



16. According to myth, this specific location was Vulcan's workshop, so its general name comes from that god's name. In 79 CE, it caused a cataclysmic event that buried the cities of Herculaneum [her-kyoo-LAY-nee-um] and Pompeii [pom-PAY]. Identify this Italian volcano. **B**  
(MOUNT) VESUVIUS **A1**
17. Along with Daniel Webster and John C. Calhoun, this statesman was a part of the Great Triumvirate. He was a proponent of the American system, promoting infrastructure and tariffs, and ran for President three times. Name this Whig statesman who represented western interests, nicknamed the "Great Compromiser." **T** **SA1**  
(HENRY) CLAY
18. An 1890s bottle cap invented by William Painter was lined with this material, before plastic became the norm. It is a hydrophobic material, which means it repels water, and is perfectly suited for stopping wine bottles. What buoyant substance is derived from the inner layer of tree bark? **B** **A1**  
CORK
19. Examples of this part of speech include when, because, as, either, and both. What part of speech may be coordinating, subordinating, or correlative and is used to connect words, phrases, clauses, or sentences? **T** **A1**  
CONJUNCTION
20. Given that  $F$  of  $X$  equals the absolute value of the quantity  $x$ , close quantity, minus 8, evaluate  $F$  of negative 4. **B** **X**  
NEGATIVE 4
21. A "dress" is usually immediately preceded by this type of rehearsal. An actor who is not in costume, but is rehearsing with props, is probably participating in one. What type of rehearsal takes its name from the fact that it focuses on props, lighting, scenery changes, and other mechanical aspects of a production? **T**  
TECH(NICAL) (REHEARSAL)
22. A maggot is a fly in this stage of metamorphosis. It is the immature, wingless feeding stage of an insect. Identify this part of an insect's life cycle, just after the egg stage. **T** **SA1**  
LARVA
23. A pentagon has sides with lengths  $X$ ,  $2X$ ,  $3X$ ,  $4X$ , and  $5X$ . If the pentagon's perimeter is equal to 180, what is the length of the longest side? **B** **X**  
60 (UNITS)

24. First and last name answer. The House indicted this politician for violating the Tenure of Office Act. Despite the Radical Republicans' disapproval, he succeeded Lincoln after the latter's assassination. Identify the seventeenth President of the United States.

(ANDREW) JOHNSON

25. Spelling required of a word in a quote from Shakespeare's Henry the Fifth: "No man should possess him with any appearance of fear, lest he, by showing it, should dishearten his army." Spell the word in the previous sentence that means, "to cause someone to lose determination or confidence".

D-I-S-H-E-A-R-T-E-N

26. If not wash your hands after you handled your pet turtle, you could be susceptible to this infection. It is named for the rod-shaped bacteria of the same genus. Identify this pathogen that can cause food poisoning or typhoid fever.

SALMONELLA

27. At the end of this play, the chorus notes that prideful men must be careful of their words, lest they have unintended consequences. Those consequences include the suicide of Haemon [HEE-mun], the son of Creon [KREE-on]. Name this play by Sophocles [SOF-uh-kleez], in which the title character wants to bury her brother Polynices [pahl-uh-NIGH-seez].

ANTIGONE [an-TIG-uh-nee]

28. Given that a polynomial function has degree 5, what is the maximum number of turning points for this function?

4

29. In geometry, shapes with sides of equal lengths receive names with a specific prefix and the suffix "-gon". For example, a shape with five equal sides is a pentagon. What would a shape with eight equal sides be called?

OCTAGON

30. Polio bound this statesman to a wheelchair. He combatted the Great Depression with the New Deal, and guided the country through most of World War II. Give this four term, longest serving President of the United States.

(FRANKLIN DELANO) ROOSEVELT

31. After a harsh obituary about him was mistakenly published in 1888, he set up endowments for prizes so he would be positively remembered. Among his 355 patents is an 1887 one for ballistite [BAL-uh-stite], or smokeless powder. What Swedish innovator invented dynamite?  
 (ALFRED) NOBEL T (HI)
32. Attorneys are sometimes required to handle a certain number of these kind of charity cases. What two-word Latin phrase literally means "for good," and is used in English to mean "done without charge"?  
 PRO BONO B X
33. Early in this musical, Madame Morrible gives one character her training wand, but expresses doubt about Galinda's magical capabilities. Its protagonist charms a broom into flying as she sings about Defying Gravity. Which musical centers on a green-skinned outcast in Oz?  
 WICKED T (ST)
34. Given the equation  $3X - 4Y = 12$ , what is this equation in slope-intercept form?  
 $Y = \frac{3}{4}X - 3$  B X
35. This amendment and its guarantees date back to the Magna Carta. It protects the rights of the accused, including the right to remain silent. Name this Constitutional Amendment contained in the Bill of Rights.  
 FIFTH (AMENDMENT) T (HI)
36. "Fiery ice," "bittersweet," and "noiseless sound" are examples of this literary element. Identify the literary device writers in which combine contradictory words side by side.  
 OXYMORON [ock-sih-MORE-ahn] B (HI)
37. A nurse is likely to use a sphygmomanometer [SFIG-moh-muh-NOM-ih-ter] to measure this principal vital sign. According to the American Heart Association, your systolic value should be between 90 and 120, and your diastolic value, between 60 and 80. Give the two-word term for the exertion placed upon the walls of veins and arteries.  
 BLOOD PRESSURE T X
38. Among the records he broke were two previously held by Mark Spitz and Larisa Latynina. He competed in the 2000 Sydney games at the age of 15, though he did not win a medal. Name this athlete, who in 2012 swam his way to more career Olympic medals than anyone else in history.  
 (MICHAEL) PHELPS T (SD)

39. Between what two integers does the square root of 165 lie between?

12 AND 13

12 AND 13

40. These plans are often the source of political conflict, and Paul Ryan proposed one last year. They are used by individuals, corporations, and governments to anticipate spending, borrowing and saving. Name this financial plan for expected expenses and revenues.

BUDGET

T

BUDGET

**End of second half – begin Inquiry Period**

### **Extra Questions**

M-1 A square has a side of length  $X$  plus 5. If the area of the square is equal to 64, what is the value of  $X$ ?

( $X =$ ) 3 (UNITS)

H-2 This six-letter artistic term derives from the Latin for "darkened." Some people incorrectly attribute this quality to clouded stained glass, but some luminosity still penetrates the glass. What term, the opposite of "transparent," refers to any object through which light will not pass?

OPAQUE (Accept: OPACITY and all word forms)

LA-3 This writer published early stories as "A. M. Barnard," and recalled her time as a Civil War nurse in Hospital Sketches. She paid her family's debts with novels like *Eight Cousins*, *Jo's Boys*, and *Little Men*. Who created Meg, Jo, Beth, and Amy March in *Little Women*?

(LOUISA MAY) ALCOTT

SS-4 This young man was holding Skittles and wearing a hoodie when he died. George Zimmerman, a neighborhood watchman, fatally shot him, allegedly in self-defense. Identify this African-American teenager, killed in Florida in February 2012.

TRAYVON MARTIN (Accept first or last or both)

SC-5 Thomas Huxley and Samuel Wilberforce were among the Oxford Museum speakers debating a theory about this, on June 30, 1860. It is the change in the inherited traits of a population of organisms through successive generations. Charles Darwin formulated a scientific argument for what process, by means of natural selection?

EVOLUTION

**Northern Kentucky Academic League  
Varsity Match—Week 6**

1. This artistic element names a type of two-dimensional art that generally uses only a single color and white space. In a painting or sculpture, the eye naturally follows an imaginary one extended beyond an outstretched arm. Name this element of art, which in geometry extends infinitely in two directions.

LINE(S) (Accept: LINE (ART) or LINE (DRAWING(S)))

2. This character oversees Stubb, Flask, Starbuck, and Ishmael on the Pequod [PEE-kwahd]. He obsessively pursues the white whale that cost him his leg years earlier. Identify the ship's captain in Herman Melville's novel Moby-Dick.

(CAPTAIN) AHAB

3. This official was born in Hawaii, an event that inspired the "birther" controversy. His term in office saw the death of Osama bin Laden and the passing of an eponymous healthcare reform bill. Who served in 2012 as President of the United States?

(BARACK) OBAMA

4. One of the most famous number sequences starts with these terms: 1, 1, 2, 3, 5, 8, 13, and so on. What is the name of this sequence?

FIBONACCI (SEQUENCE) *Emma*

5. This is the time taken for one full oscillation, and is the reciprocal of frequency. What is the duration of one cycle in a repeating event?

PERIOD

6. This mountain range contains the city of Denver, It creating a continental divide in North America, and has peaks over fourteen thousand feet high. What is this Western United States mountain range?

ROCKY (MOUNTAINS) (Accept: ROCKIES)

7. This novel's characters include Madame Zeroni [zuh-RO-nee]. Kissin' Kate Barlow, and Zero. Imprisoned at Camp Green Lake, Stanley Yelnats lifts a family curse by finding his great-grandfather's suitcase. Name this winner of the 1999 Newbery Medal, by Louis Sachar [SACK-er].

HOLES

8. This painter based many of his works, such as *The Ox-Bow*, on scenes he saw and studied near his hometown. Often grouped with Asher Durand and Thomas Doughty, he was a leader in the movement to portray the natural beauty of the Adirondacks. Name this artist associated with the Hudson River School.

(THOMAS) COLE

9. These substances include materials like germanium [jer-MAY-nee-um] and silicon. They are vital to the design of electronic components and circuitry, including transistors, laser diodes, and processing circuits. What variable resistance materials are somewhere between conductors and insulators?

SEMICONDUCTORS

10. This architect's designs include what is today his country's Royal Naval College. He rebuilt over 50 churches in the wake of a 1666 fire. Identify this 17th and 18th century architect, who created his greatest designs as Surveyor of Works for the English monarch.

(SIR) (CHRISTOPHER) WREN

11. This character, a member of the Duchess's household, informs Alice that everyone in Wonderland is mad. When only his head appears, the King and Queen of Hearts debate their executioner on whether something without a body can be beheaded. Which character from Alice's Adventures in Wonderland can disappear at will, leaving only his trademark grin?

CHESHIRE CAT

12. This region accounts for more than half of the world's remaining rainforests. It primarily sits in Brazil, Peru, and Colombia, and shares its name with the world's second-longest river. Name this South American rainforest.

AMAZON (RAINFOREST)

13. What is the value of the following: the absolute value of 5 minus the absolute value of negative 7?

-2

14. In a survey of the color of the car that people drive, 38 people said they drive silver cars. This was 25% of the people surveyed. How many people were included in the survey?

152

15. The "rounded" type of this musical form features a brief return to opening material at the end of the piece. This basic musical form is usually represented as A-B [AY BEE]. Name this two-part musical form, which shares its name with a numerical system that uses only ones and zeroes.

BINARY (FORM)

16. They secrete substances such as epinephrine [ep-uh-NEF-rin], calcitonin [kal-suh-TOH-nun], growth hormones, and many others. They can be divided into two types: endocrine and exocrine [ECK-suh-krin]. Identify this group of organs that include the thyroid, the prostate, and the pituitary.

GLANDS

17. This fantasy series comprises twenty-two books, including The Rogue Crew, Martin the Warrior, and The Bellmaker. Brave mice defend the title abbey from predators like eels, sea serpents, and wolverines. What is this fantasy series by Brian Jacques [JAKES]?

REDWALL

18. This map feature allows cartographers to use symbols instead of text. It may signify that crosses indicate churches and that green areas are parks. Which map feature identifies the meanings of symbols used?

LEGEND

19. On Earth, a one kilogram mass has a weight of 10 Newtons in the S. I. system. In the customary system, a one kilogram mass has a weight of 2.2 pounds. If an object weighs 70 newtons, how much does it weigh in pounds?

15.4 (POUNDS)

20. This 12-letter word starting with "C" is a method of changing another being's behavior. It can involve the pairing of an outside stimulus to an involuntary reaction, or using positive or negative reinforcement towards an action. Give the word for this modification of another organism's behavior, and often follows the word "operant."

CONDITIONING

21. This book's title comes from a quotation by Rube Foster, founder of the Negro National League. It describes the Negro League from its origins in the 1920s to its decline when Jackie Robinson joined Major League Baseball. Name this book, which earned the 2009 Sibert and Coretta Scott King Author Awards for Kadir Nelson.

WE ARE THE SHIP (:THE STORY OF NEGRO LEAGUE BASEBALL)

22. This composer's Eighth Symphony has no true, traditional slow movement. His Sixth Symphony has five movements instead of the usual four, and was the first truly programmatic symphony. Identify this composer who depicted a "Thunderstorm" as part of his "Pastoral" symphony, and whose Ninth Symphony includes the "Ode to Joy."

(LUDWIG VAN) BEETHOVEN

Twombly

23. This dynasty lasted from 1046 to 256 B.C., the longest in its country's history. During this time, iron working was discovered and philosophers such as Confucius and Laozi [LAO zee] were active. Give this Chinese dynasty which came after the Shang [SHANG] and before the Qin [CHIN] dynasties.

ZHOU [CHOH] (DYNASTY)

24. The inner lane of a high school track has a length of a quarter-mile. If Jeff goes around the track once, how many feet did he travel?

1,320 (FEET)

25. This composer created a set of Variations on "America" which includes a variation in a mariachi [mahr-ee-AH-chee] style. He mixed hymn tunes and the opening motive of Beethoven's Fifth in the movement "The Alcotts" from his Concord Sonata. Name this American composer of the early 20th century known for his use of polytonality [pol-ee-toh-NAL-ih-tee] and extensive folk song quotation.

(CHARLES) IVES

26. This is the atomic number of the element vanadium [vuh-NAY-dee-um]. Perhaps a better-known fact is that it is also the number of structures of DNA and proteins found in a haploid cell. What is the number of chromosome pairs in humans?

23

27. This man, along with Octavian [oct-TAY-vee-un] and Lepidus [LEP-ih-dus], was a member of the Second Triumvirate [try-UM-ver-it]. He was an important ally of Julius Caesar, but later, fought Octavian at Actium [ACT-ee-uhm] and later committed suicide to avoid capture. Name this Roman commander and politician, lover of Cleopatra [KLEE-oh-pat-rah].

(MARK) ANTONY

28. This narrative poem heavily uses internal rhyme and alliteration while borrowing its meter from an Elizabeth Barrett poem. A talking bird, perched on a bust, drives a distraught lover insane by his repetition of "nevermore." Identify this poem by Edgar Allen Poe.

(THE) RAVEN



29. The United Nations stated that on the symbolic date of October 31, 2011, the world population reached this milestone. The U.S. Census Bureau estimated that the mark would be reached on March 12, 2012. Rounded to the nearest billion, what is the current world population?

7 (BILLION)

30. This empire reached its height under Justinian the First. It was founded in A.D., 330 when Constantinople became capital of part of the Roman Empire. What empire fell to the Ottoman Turks in 1453?

BYZANTINE (EMPIRE) [BIZ-an-teen]

(Accept: BYZANTIUM [bih-ZAN-shee-um, bih-ZAN-tee-um]; EASTERN ROMAN EMPIRE)

31. This play which premiered in Chicago in 1944 is considered to be autobiographical. Told from the perspective of Tom Wingfield, it is an account of his mentally and physically ill sister, who lives in a world of model animals. Identify this memory play by Tennessee Williams.

(THE) GLASS MENAGERIE

32. This type of polygon always has an interior angle with a measure that is greater than 180 degrees. What is the name of a polygon that is not convex?

CONCAVE

33. Zildjian [ZILDGE-an] is one company known for manufacturing these musical instruments. They may be made to "sizzle" by placing a chain or string of beads over the top of one. Types of what percussion instrument include trash, splash, and crash?

CYMBAL(S) (Accept any valid type, such as (RIDE) CYMBAL(S) or (CRASH) CYMBAL(S), etc.)

34. A semi-circle has a radius of 10 units. What is the area, in square units, of the semi-circle?

50 PI (SQUARE UNITS)

35. Some define the boundary of the Arctic as the southern limit of the icy region that contains this. Commonly found in the tundra climate area, it is also called pergelisol [per-JEL-uh-sawl]. Give the term for soil or rock that remains at freezing temperatures or below for at least two consecutive years.

PERMAFROST

36. This general type of music takes its name from the fact that, originally, the musicians were sequestered in a separate room. It includes music for string and woodwind quintets, and often served as light entertainment for a dinner or a party. Name this type of music written for private, intimate spaces.

CHAMBER (MUSIC)

37. This navigator was born in the Italian city of Genoa, but sailed for England. In 1497, he sailed his ship, the Matthew, to the New World and reached Newfoundland. What explorer from England reached the Americas in 1497?

(JOHN) CABOT

38. This short story's characters include Old Man Warner, the town elder; Mr. Summers, the organizer of the title event; and Tessie Hutchinson. When Tessie wins the title event, the villagers stone her. Name this Shirley Jackson short story.

(THE) LOTTERY

39. In an equilateral triangle, each side has a length of 10 units. What is the length, in units, of an altitude of the triangle?

5 SQUARE ROOT OF 3 (UNITS) (Accept: 5 RADICAL 3 (UNITS))

40. There are 88 of these recognized and named areas of the celestial sphere. They are named after common animals, objects, or classical mythology characters. Aquarius, Gemini, Libra, and Taurus are just a few of what star groups?

CONSTELLATIONS

**End of first half – begin Inquiry Period**

15/17

2012-13 Governor's Cup Practice Questions  
Middle Grades – Round 11

1. This dancer was forced out of America due to fear that she was a Communist spy, since she had married a Russian author during her first tour abroad. This dancer's work represented the transition from classicism to expressionism. Name this early 20th century dancer from the following two words: scarf, car.

(ISADORA or ANGELA) DUNCAN

say only last unless asked

- challenge 2. This figure from African and Native American folklore outsmarts larger animals, including a wolf, a fox, and a bear. When he gets stuck to Tar Baby, the fox throws him into a briar patch, which he easily escapes. Name this animal, whom Joel Chandler Harris popularized in his Uncle Remus stories.

BRER RABBIT (Not: UNCLE REMUS)

→ said "rabbit"

- 18 3. This indigenous nation was charged with protecting the Iroquois Confederacy from eastern invaders. The name of this tribe translates as "People of the Flint." What Native American tribe shares its name with a hairstyle?

MOHAWK

4. In statistics, a 5 number summary of data consists of the minimum, lower quartile, median, upper quartile, and maximum. What is the name for a graphical display that uses all of this information?

BOX AND WHISKER (PLOT) (Accept: BOX ( PLOT))

EMMA

5. They're not quite ready to leave the airport because their luggage was lost. Correctly spell the possessive pronoun in the previous sentence.

T-H-E-I-R

Emma

6. This dance, developed by Vernon and Irene Castle, is known as a "quick step" when performed at a fast tempo. A combination of steps, turns, and side-to-side movements, it represents the influence of ragtime on traditional ballroom steps. Name this dance, which sounds like it might be done by a "Fantastic Mister."

FOX TROT

7. This governor was given the nickname "Old Silver Leg" because of a prosthetic limb. He was known for his harsh reputation, including expelling Jews from the colony, until the English seized Fort Amsterdam and deposed him in 1664. Identify the last Director-General of New Netherland.

(PETER) STUYVESANT [STY-vehs-ant]

Emma

8. Two examples of this include posters of Uncle Sam saying, "We want you," and Rosie the Riveter saying, "We can do it." Often employed by governments, it is any form of media meant to change the attitude of large groups of people. From the Latin word for "propagate," what technique of communication is meant to influence public opinion?

PROPAGANDA

9. Our vacation to Panama City Beach, Florida, was fun and exciting! The previous sentence is an example of what type of sentence that contains one independent clause?

SIMPLE (SENTENCE)

10. Suppose you draw a single card from a standard deck of 52 cards. If you know that the card is red, then what is the probability that you drew a diamond?

50 PERCENT (Accept: 1/2)

11. This branch of biology uses the Latin language. What branch of science is concerned with classifying organisms into groups based on similarities of structure, origin, or other features?

TAXONOMY

12. This military officer owned and operated a bookstore in Boston before becoming chief artillery officer of the Continental Army. He was the first Secretary of War of the United States. Name this man, who lent his name to an Army base in north-central Kentucky.

(HENRY) KNOX

13. This religious figure, whose teachings are known as "sutras," was born Siddharta Gautama. Sects of the religion propagated by this man include Mahayana [MAH-hah-YAHN-ah] and Zen. Name this religious figure, who taught his followers about the path to nirvana.

BUDDHA

14. The chromosomes return to chromatin [KROH-muh-tun]. The spindle disintegrates, and the nuclear membrane takes its shape again. These characteristics happen during what final phase of mitosis?

TELOPHASE

15. This location lies between the Phlegethon [FLEG-uh-thahn] and Acheron [ACK-er-ahn] rivers. Its lowest point is the pit Tartarus, which houses villains such as Sisyphus and Tantalus. Name this mythological locale also bounded by the River Styx.

(GREEK) UNDERWORLD (Accept: HADES)

16. This part of speech is typically used to express an emotion. What grammatical term may be considered a sudden, short utterance and can stand alone?

INTERJECTION

17. This political party was succeeded by the Know-Nothings and the Republicans in the 1850s. They supported modernization and protectionism, and were led by Daniel Webster, William Henry Harrison, and Henry Clay. What was this political party formed to oppose Jackson and the Democrats?

WHIG (PARTY)

18. What is the sum of 12 and the absolute value of negative 12?

24

19. Natural enemies of this animal, which belongs to the genus *Castor*, include bobcats, coyotes and wolverines. The animal has six eyelids, in two sets of three, with one set being transparent to help it swim underwater. What aquatic species lives in homes called "lodges"?

BEAVER

20. One of these dramatic monologues notes that "Life's but a walking shadow, a poor player that struts and frets his hour upon the stage." Another one, also by Shakespeare, begins with the line "To be or not to be." In what specific type of monologue does a character reveal her innermost thoughts and feelings?

SOLILOQUY (Accept other forms of the word)

21. Spelling required. Pelt can mean an animal's fur, or to attack someone repeatedly by hurling things at him. Spell "pelt".

P-E-L-T

22. State your answer with a common denominator: What is the result when you add the fraction 3 over A to the fraction 5 over B?

$(3B + 5A) / (AB)$  (Accept: 3B PLUS 5A ALL OVER AB)

23. This group originated in 1865 in Pulaski, Tennessee, under Nathan Bedford Forrest's leadership. From Reconstruction onward, they suppressed the rights of Southern African Americans. Name this terrorist organization devoted to white supremacy.

(FIRST) KU KLUX KLAN

24. Given the function, F of X equals  $3x + A$ , if negative 2 is a zero of the function, what does A equal?

6

25. The Greek playwright Euripides [yoo-RIP-uh-deez] has been criticized for overuse of this theatrical convention. Originally a vehicle for divine proclamations, it has come to mean any unbelievable explanation that allows for a situation to be resolved. Name this dramatic convention, literally meaning "god from the machine."

DEUS EX MACHINA [DAY-us eks MAH-kuh-nuh]

Helen

26. These reproductive cells are produced by ferns and conifers, as well as many other green plants, bacteria and molds. Unlike gametes, they are asexual, which means they can reproduce all by themselves. Identify these structures that are commonly dispersed by the wind and windblown plants.

SPORES

Sam

27. This field of study's name comes from the Greek root meaning "creep". Uncle Monty practices it in A Series of Unfortunate Events. Which branch of zoology includes the study of reptiles and amphibians?

HERPETOLOGY

Thom

28. This statesman served as Andrew Jackson's Vice President until the Peggy Eaton affair. He strongly advocated free trade, slavery, and states' rights, eventually supporting the right to secede. Name this South Carolina senator, a member of the Immortal Trio.

(JOHN C.) CALHOUN

ST

29. Most devices used in the industrial revolution were referred to as this. For example, the "gin" in Eli Whitney's cotton gin is a shortening of this English word. What do we call a machine that is designed to convert energy into useful mechanical motion?

ENGINE

ST

30. This document originally contained twelve parts, but Congress only passed ten. Among others, it guarantees the rights of the accused and the freedoms of speech and religion. Give the collective name for the first ten Amendments to the Constitution.

(UNITED STATES) BILL OF RIGHTS

ST

31. This Latin phrase is used as a synonym for "genuine" and "sincere." The phrase was used to describe the kind of husband Holly Hunter wanted in the film "O Brother, Where Art Thou"? What two-word phrase literally means "in good faith"?

BONA FIDE

Helen

32. This musical closes with instructions on how to "address" the title creatures. At its climax, the glamorous Grizabella ascends to the Heavside [HEV-ee-side] Layer. Name this Broadway musical, whose characters include Old Deuteronomy [doo-tuh-RON-uh-mee], the Rum-Tum Tugger, and Macavity [muh-KAV-uh-tee].

CATS

33. What is the slope between the points (4, -3), and (4, 5)?

UNDEFINED (Accept SIMILAR ANSWER)

zero?

34. This agricultural plant has been linked this to risk of premature heart attack, as well as chronic obstructive pulmonary disease. The surgeon general has required warnings on packages of products that use the plant. Identify this plant which contains nicotine.

TOBACCO

35. This athlete lit the torch to open the 1996 Atlanta Olympics. In August 2012, his Louisville childhood home was listed for sale at about fifty thousand dollars, and that home sits only a few miles from his namesake "Center." Name this Kentucky native, a legendary figure in boxing, who called himself "The Greatest of All Time."

(MUHAMMAD) ALI (Accept: (CASSIUS) CLAY (JUNIOR))

36. This character is the counterpart to the main character, and the source of a story's primary conflict. What character opposes the protagonist in a significant way?

ANTAGONIST

37. This philosopher frequently collaborated with Friedrich Engels [FREED-rik EEN-gehls]. Together, they authored Das Kapital [DAHs KAHp-ee-tahl] and the Communist Manifesto. Give this German philosopher who formulated Socialism and Communism.

(KARL) MARX

38. What is the product when you multiply X to the third power by X to the 5th power?

X TO THE 8TH (POWER)

39. Quadratic functions can be stated in standard form, A X squared plus B X plus C. Given this quadratic function, 3 times the quantity, X minus 2, close quantity squared, plus 5, What is the standard form of this function?

(Y = ) 3 X SQUARED MINUS 12 X PLUS 17

40. This artistic movement drew inspiration from De Stijl [duh STAHYL] artists such as Mondrian [mahn-dree-AHN]. Championed by Frank Stella, it gained momentum as a reaction against the work of Jackson Pollock. Name this artistic style, which espoused the maxim "less is more" by reducing art to its most basic elements.

MINIMALISM (Accept word forms)

**End of second half – begin Inquiry Period**

**Extra Questions**

- LA-1 This typographical device is evident when words are slanted to the right. What typographical device is used in word processing for the titles of plays, pamphlets, artworks, or famous speeches?

ITALICS

- SS-2 This war was declared partially in response to the impressment of sailors. Events during this conflict included the burning of Washington, D.C. and the Battle of New Orleans. Name this war fought between the United States and the British Empire.

(WAR OF) 1812

- H-3 Visitors to this city normally travel through the city of Jeddah on their way. This city, which is only open to members of a certain religion, is the destination of a pilgrimage known as the Hajj. Name this birthplace of Mohammed, the holiest city in Islam.

MECCA

- M-4 There are many different subsets of the real numbers. Which subset of the real numbers consists of the positive integers?

NATURAL (NUMBERS) (Accept: COUNTING (NUMBERS))

- SC-5 This type of lizard is found in tropical and semitropical regions around the world, and scientists have discovered something interesting about their evolution. At the moment, about 60 percent of species of this lizard have adhesive toe pads, but they have gained and lost them as their habitat have changed. What type of lizard has no eyelids, and must use its tongue to keep its vision clear?

GECKO