

1991 Florida High School Academic Tournament

Introduce yourself.

Welcome participants, give round number and the significance of this particular competition. (The two teams with the highest scores will compete in the semifinals on Sunday at 4:00 p.m. The remaining teams will compete on Sunday at 2:00 p.m.)

Have judges, scorekeepers and student helpers introduce themselves. (Judges should give their name and the areas in which they will be judging only.)

Have the team coaches come forward to introduce himself/herself and team members.

Conduct a button check.

Begin 5-point question round.

MUS 1. What musical term means a mass for the dead?

Answer: requiem

(Source: Harvard Dictionary of Music, p. 725)

MATH 2. In which one of the following four equations is the product of the roots the greatest?

- A. $x^2 + 8x = 0$
- B. $x^2 + 5x + 6 = 0$
- C. $x^2 - 2x - 15 = 0$
- *D. $x^2 - 7x + 12 = 0$

HUM 3. Name the French philosopher who believed that "civilization corrupts" and who contributed the concept of the "noble savage."

Answer: (Jean-Jacques) Rousseau

SCI 4. Fill in the blank. A monsoon is to Asia as a _____ is to the Rocky Mountains.

Answer: chinook

SS 5. Which one or ones of the following four are not positions once held by Thomas Jefferson?

- *A. Secretary of Treasury
- B. Governor of Virginia
- C. Minister to France
- D. Vice President of the United States

- MATH** 6. Assume that a and b are chosen at random from the set 11, 12, 13, 14, 15, 16 and that a and b are equal. What is the probability that $a + b$ is even?

Answer: 1

- ENG** 7. Match each of the four authors to the state with which each is identified.

Authors	States
1. Flannery O'Connor	A. Florida
2. James Fenimore Cooper	B. Georgia
3. Marjorie Kinnan Rawlings	C. Mississippi
4. William Faulkner	D. New York

Answer: 1-B, 2-D, 3-A, 4-C

- SCI** 8. Give the number of protons and neutrons in the nucleus of the isotope of chromium having an atomic mass of 52 and an atomic number of 24.

Answer: protons 24, neutrons 28

- ENG** 9. Which one of the following four is not one of Walter Mitty's fantasies?

- A. world-famous surgeon
- B. wartime pilot
- *C. prison escapee
- D. soldier before a firing squad

(Source: Dictionary of Cultural Literacy)

- SS** 10. Fill in the blank with the one missing word. According to Freud, the structure within the personality that is thoughtful, rational and realistic is called the _____.

Answer: ego

(Source: Understanding Psychology)

- MATH** 11. A student must have a test average of 80% to earn a grade of B. If the scores on four tests are 78%, 72%, 75% and 85%, what is the minimum percent score that can be made on a fifth test in order to earn the B grade?

Answer: 90

Handwritten calculation for problem 11: A circle containing the numbers 72, 75, 78, and 85. To the right of the circle is a plus sign and the number 10. Below the circle is a horizontal line with the number 80 written below it.

- SCI** 12. Which one of the following four is not a vector quantity?

- A. momentum
- B. velocity
- C. force
- *D. energy

(Source: College Physics, Sears Zemansky Young Study Guide, pg. 2)

- ENG 13. Give the derisive term for the group of American writers who between 1902 and 1911 worked to actively expose dishonest methods and unscrupulous motives operative in big business and in city, state, and national governments.

Answer: Muckrakers

- ART 14. Which one of the following four Renaissance artists is credited with developing linear perspective?

- A. Masaccio
- B. Alberti
- C. Giotto
- *D. Brunelleschi

(Source: The Humanities, vol. 1, p. 235)

For the next question you will be given Handout 3-1. Do not distribute these until you are instructed to do so. (pause) You may distribute these face up.

- MATH 15. Match each of the four equations to its graph on the handout.

- | | <u>Equations</u> |
|----|-----------------------|
| 1. | $y = \frac{1}{2} x^2$ |
| 2. | $y = 3x^2$ |
| 3. | $y = (x-3)^2$ |
| 4. | $y = (x+3)^2$ |

- Answer:
- 1. C
 - 2. B
 - 3. A
 - 4. D

- SS 16. Match each of the four countries to the territory it received at the Congress of Vienna.

- | <u>Countries</u> | <u>Territories</u> |
|------------------|--------------------|
| 1. Sweden | A. Malta |
| 2. Holland | B. Lombardy |
| 3. England | C. Belgium |
| 4. Austria | D. Norway |

Answer: 1-D, 2-C, 3-A, 4-B

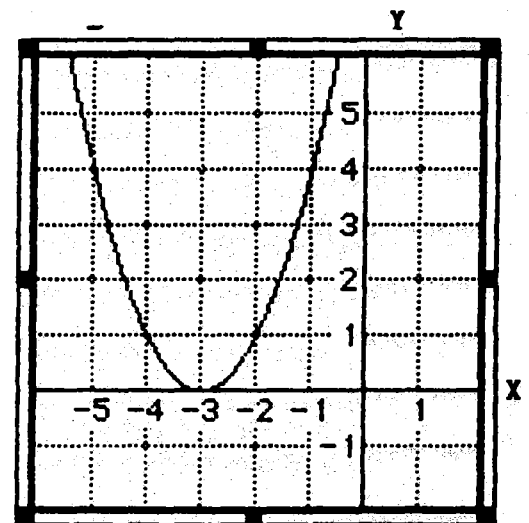
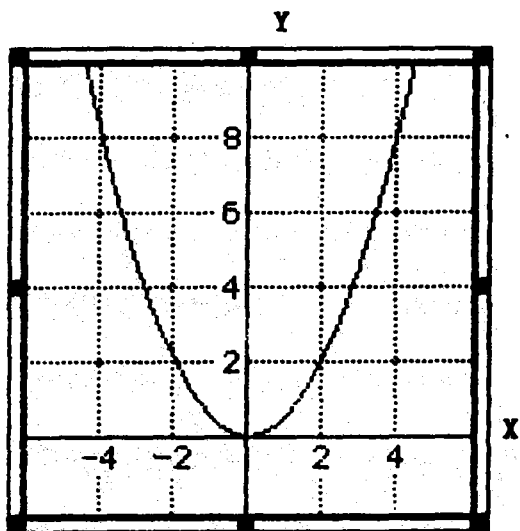
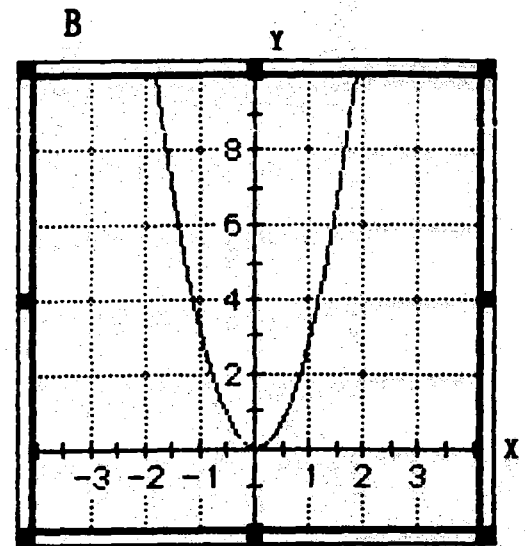
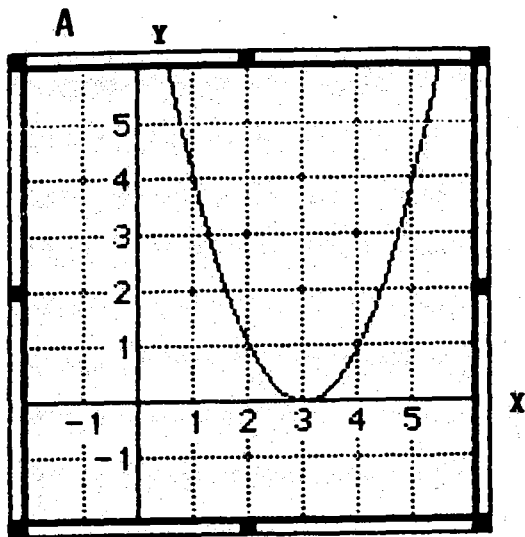
(Source: World History, Amsco)

- ENG 17. Fill in the blank using the appropriate first person singular pronoun:

Mary Jane works harder than ____.

Answer: I

Handout 3-1



SS 18. Match each of the four Greek men to his description.

<u>Greeks</u>	<u>Descriptions</u>
1. Hippocrates	A. Father of Tragedy
2. Herodotus	B. Father of Medicine
3. Aeschylus	C. Father of Geometry
4. Euclid	D. Father of History

Answer: 1-B, 2-D, 3-A, 4-C

SCI 19. Which one of the following four early scientists supported the theory of abiogenesis?

- A. Louis Pasteur
- B. Lazzaro Spallanzani
- *C. John Needham
- D. Francesco Redi

MUS 20. Match each of the four composers to his work.

<u>Composers</u>	<u>Works</u>
1. Bach	A. <u>The Magic Flute</u>
2. Handel	B. <u>Christmas Oratorio</u>
3. Mozart	C. <u>The Creation</u>
4. Haydn	D. <u>Water Music</u>

Answer: 1-B, 2-D, 3-A, 4-C

End of 5-point round.

Begin 10-point team question.

Read: For this team question you will be given Handout 3-2.

Do not distribute the handouts until you are instructed to do so. This team question is worth 10 points. Each question is worth one point.

You will be given 2 minutes. Please identify one handout as your team answer sheet in the upper left-hand corner.

Begin.

Time 2 minutes.

STOP!

Identify one handout as your team answer sheet and hold it in the air. The judges will correct your work.

Read answers: (one point each)

- | | |
|-------|------|
| A. 8 | F. 3 |
| B. 10 | G. 6 |
| C. 2 | H. 4 |
| D. 7 | I. 5 |
| E. 1 | J. 9 |

(Source: Earth Science, Heath, p. 95)

Handout 3-2

Team # _____

Match each of the symbols on a topographical map of the U.S. Geological Survey to the feature each represents.

A. church _____

F. power line _____

B. swamp _____

G. cemetery _____

C. bridge _____

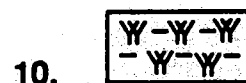
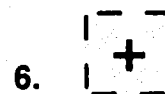
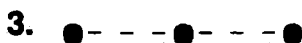
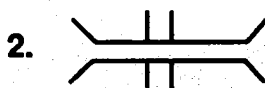
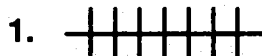
H. road _____

D. building _____

I. tunnel _____

E. railroad _____

J. stream _____



Announce scores from team question.

Two-minute break. (All coaches should report to scorekeepers whether substitutions are made or not.)

Announce scores after the round.

Begin 10-point question round.

SS 21. Identify the Republican and the Democratic presidential candidates in the election of 1928.

Answer: (Herbert) Hoover, Republican
(Alfred) Smith, Democratic

ENG 22. Match each of the four authors to the appropriate work.

<u>Authors</u>	<u>Works</u>
1. Alice Walker	A. <u>I Know Why the Caged Bird Sings</u>
2. Richard Wright	B. <u>Bronzeville</u>
3. Maya Angelou	C. <u>The Color Purple</u>
4. Gwendolyn Brooks	D. <u>Black Boy</u>

Answer: 1-C, 2-D, 3-A, 4-B

MATH 23. Find the absolute value of the difference between the coefficients of the second and third term of the expansion of the quantity $A + B$ raised to the twelfth power.

Answer: 54

For the next question you will use this information. When at the clinic, Jabari was told that blood would be drawn from his brachial region and that he would receive an injection of penicillin in his gluteal region.

SCI 24. This is a two-part question.

Part 1: From which body part would the donated blood be drawn?

Part 2: Which body part would receive the shot?

Answer: Part 1: front of elbow (accept: upper arm)
Part 2: buttock (accept: rear end)

ART 25. Fill in the blank with the one missing word. Originally a _____ was a Roman public meeting building with an oblong nave whose floor plan was later adopted by the Christians for their churches.

Answer: basilica

ECON 26. Which one of the following four actions would cause an economy to be producing at a point inside its production possibilities curve?

- A. efficient allocation of all factors of production
- B. accumulation of capital
- *C. unemployment of labor and capital
- D. population growth

- SCI 27. Give the name of the person whose principle states that "as the velocity of a fluid increases, the pressure exerted by that fluid decreases."

Answer: Bernoulli

(Source: Physics: Principles and Problems, p. 235, 233, 231)

For the next question you will be given Handout 3-3. Do not distribute these until you are instructed to do so. (pause) You may distribute these face up.

- FL 28. Choose one of the three languages and identify which one or ones of the four phrases are not greetings.

Answer: A

- MATH 29. Find all integral values of n for which the quantity $n - 1$ factorial is less than 24.

Answer: 1,2,3,4

- SS 30. Name the two colonies described in the following statements.

1. Settled by Sir Walter Raleigh, it is known as the "Lost Colony."
2. It was the first permanent English settlement in North America.

Answer: 1. Roanoke; 2. Jamestown

(Source: Boorstin-History of the United States)

- ENG 31. Match each of the four literary monsters or monstrous characters to the work in which each appears.

<u>Literary Monsters or Monstrous Characters</u>	<u>Works</u>
1. Roger Chillingsworth	A. <u>The Crucible</u>
2. Mephistophilis	B. <u>Scarlet Letter</u>
3. Grendel	C. <u>Dr. Faustus</u>
4. Abigail Williams	D. <u>Beowulf</u>

Answer: 1-B, 2-C, 3-D, 4-A

- HUM 32. Which one of the following three describes the term Hellenistic?

- A. having to do with Helen of Troy
- *B. Greek-like
- C. inhabitant of Hades

Handout 3-3

Spanish: A. Hasta la vista.
B. ¿ Qué pasa?
C. Buenos días.
D. ¿ Cómo estás?

French: A. A tout à l'heure.
B. Ça va?
C. Bonjour.
D. Comment vas-tu?

German: A. Bis später!
B. Guten Abend!
C. Guten Tag!
D. Wie geht es Ihnen?

For the next question you will be given Handout 3-4. Do not distribute these until you are instructed to do so. (pause) You may distribute these face up.

MATH 33. Line f is parallel to line g . Find the measure in degrees of angle C .

Answer: 150

SS 34. Which one of the following four religious groups did not flee from England to the New World to escape persecution?

- *A. Anglicans
- B. Quakers
- C. Puritans
- D. Catholics

SCI 35. What is the density in grams per cubic centimeter of an object with a mass of 14.4 grams and a volume of 2.0 milliliters?

Answer: 7.2

ENG 36. Identify the author of the Nobel Prize Acceptance Speech for the 1949 literature prize which includes this quotation:

"Man will not merely endure; he will prevail."

Answer: (William) Faulkner

SCI 37. Give the common name of the organism whose early ancestor had the scientific name Eohippus.

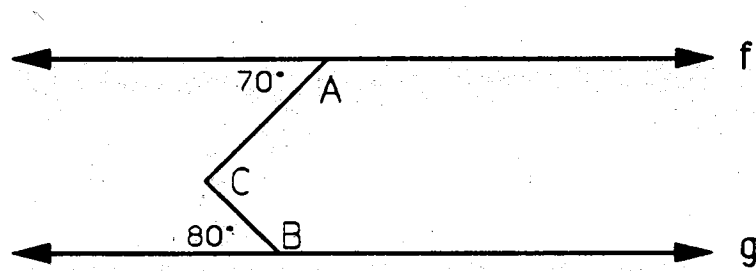
Answer: horse

(Source: Biology: A Journey Into Life, Arms & Camp, p. 254)

MATH 38. A farmer divides his herd of N cows among his four sons so that one son gets $\frac{1}{4}$ the herd; a second son, $\frac{1}{4}$; a third son, $\frac{1}{5}$; and the fourth son, 11 cows. Compute the value of N .

Answer: 220

Handout 3-4



ENG 39. Match each of the four figures of speech to the appropriate example.

<u>Figures of Speech</u>	<u>Examples</u>
1. metaphor	A. cruel kindness
2. metonymy	B. She had cadillacs in her eyes.
3. oxymoron	C. "A mighty fortress is our God."
4. malapropism	D. he took to the bottle

Answer: 1-C, 2-D, 3-A, 4-B

For the next question you will listen to a tape of two musical selections (tape 3-5, no handout). Remember, there will be one two-part question concerning this tape.

MUS 40. Supply the missing words from each of the two titles.

1. Also sprach _____
2. _____ Sonata

Answer: 1. Zarathustra
2. Moonlight

End of 10-point round.

Begin 20-point team question.

Read: For this team question you will be given Handout 3-6.

Do not distribute the handouts until you are instructed to do so. This team question is worth 20 points. Each blank is worth 2 points.

You will be given 2 minutes. Please identify one handout as your team answer sheet in the upper left-hand corner.

Begin.

Time 2 minutes.

STOP!

Identify one handout as your team answer sheet and hold it in the air. The judges will correct your work.

Handout 3-6

Team # _____

"You've Nothing To Fear"

Match each description to the correct phobia.

- | | |
|--|----------------------|
| _____ 1. fear of high places | A. claustrophobia |
| _____ 2. fear of the number thirteen | B. xenophobia |
| _____ 3. fear of animals | C. hydrophobia |
| _____ 4. fear of light | D. agoraphobia |
| _____ 5. fear of enclosed spaces | E. nyctophobia |
| _____ 6. fear of sleep | F. acrophobia |
| _____ 7. fear of darkness | G. zoophobia |
| _____ 8. fear of strangers or foreigners | H. hypnophobia |
| _____ 9. fear of water | I. triskaidekaphobia |
| _____ 10. fear of open places | J. photophobia |

Read answers: (2 points each)

1. F
2. I
3. G
4. J
5. A
6. H
7. E
8. B
9. C
10. D

Announce scores from team question.

Two-minute break. (All coaches should report to scorekeepers whether substitutions are made or not.)

Announce scores after the round.

Begin 15-point question round.

SS 41. Name the two South American countries that are landlocked.

Answer: Bolivia and Paraguay

HUM 42. Match each of the four discoveries to its discoverer.

<u>Discoveries</u>	<u>Discoverers</u>
1. the tomb of Tutankhamen	A. Heinrich Schliemann
2. the ruined city of Troy	B. William Harvey
3. the rings of Saturn	C. Howard Carter
4. the circulation of human blood	D. Christian Huygens

Answer: 1-C, 2-A, 3-D, 4-B

ENG 43. Spell the homonyms for the following two definitions.

1. an assembly which meets for deliberation
2. to advise

Answer: 1. council, 2. counsel

MATH 44. Solve the equation over the set of real numbers, the square root of the quantity x squared minus five equals negative two.

Answer: empty set (accept: no solution or null set)

ENG 45. Fill in the blank. Plato's _____ is one of the earliest works which formulates the utopian society.

Answer: Republic

COMP 46. Which one or ones of the following four steps are components of a counting loop within a computer program written in the BASIC language?

- *A. a test step
- *B. an increment step
- *C. a re-entry step
- *D. an exit step

(Source: Computer Programming in the BASIC Language, Jacobs et al, p. 158)

SCI 47. For what metallic conductor of electricity is ^Kchalcopryite the principal ore?

Answer: copper
(source: Earth Science, Heath, p. 75)

chalc = copper (Gr.)

SS 48. Fill in the blank with the missing word.

The _____ rule prohibits illegally obtained evidence from being admitted into a court trial.

Answer: exclusionary

(Source: Dictionary of Legal Terms, p. 164)

MATH 49. This is a two-part question. A line has equation $2x + 3y = 12$. Part 1: What is the slope of the line? Part 2: What is the abscissa of the point where the graph crosses the y-axis?

Answer: Part 1: $-2/3$, Part 2: 0

For the next question you will listen to a taped recording in French, Spanish, and German (FL tape 3-7, no handout). Remember, there will be one question concerning this recording.

FL 50. Name the creator of the character described in the recording.

Answer: Spanish: Cervantes, French: (Edmond de) Rostand,
German: (Johann Wolfgang von) Goethe

ENG 51. Match each of the four American Pulitzer Prize winning novelists to her work.

- | <u>Novelists</u> | <u>Novels</u> |
|-------------------------|---------------------------------|
| 1. Marjorie K. Rawlings | A. <u>So Big</u> |
| 2. Edna Ferber | B. <u>To Kill A Mockingbird</u> |
| 3. Pearl S. Buck | C. <u>The Good Earth</u> |
| 4. Harper Lee | D. <u>The Yearling</u> |

Answer: 1-D, 2-A, 3-C, 4-B

(Source: p. 612, Oxford Companion to American Literature)

- MATH 52.** What is the volume in cubic centimeters of a cylinder with the same base area and height as a cone whose volume is 144 cubic centimeters?

Answer: 432

- SCI 53.** Explain in terms of thermodynamics why a drink becomes cool when ice is added?

Answer: Heat flows from areas of high concentration to areas of low concentration. (accept: similar response)

- MS 54.** Supply the single word that would identify the objects or actions described in the following four statements.

- a tableau or exhibit on wheels
- an air-filled sac in coelenterates
- to irrigate or flood
- to drift from job to job

Answer: float

- SS 55.** Give the term used for the Chinese effort of 1958 to accelerate the rate of economic development by maximizing investment growth but resulting in an economic and food crisis.

Answer: Great Leap Forward

(Source: Study of Economics)

- MUS 56.** Who am I?

- I was born in 1888 and lived to the age of 101.
- I began my musical career as a singing waiter.
- The Dutch singer, Taco, in 1983, revived my 1929 hit "Puttin' on the Ritz."
- Of nearly 1,000 songs, my first big hit was "Alexander's Ragtime Band"

Answer: (Irving) Berlin

- MUS 57.** Supply the Irving Berlin song titles for each of the following three fractured titles.

1. An Attractive Young Lady is Similar to a Tune.
2. A Snowy Noel
3. There is Not an Occupation Similar to the Acting Profession.

Answer: 1. "A Pretty Girl is Like a Melody"
2. "White Christmas"
3. "There's No Business Like Show Business"

MS 58. Which one or ones of the following four events took place in the first half of the nineteenth century?

- A. Pierre and Marie Curie discover radium and polonium.
- *B. Louisiana receives statehood.
- *C. Beethoven composes his "Eroica" symphony.
- *D. Goya paints his Execution of the Citizens of Madrid.

(Source: The Timetables of History, 1898, 1812, 1804, 1808)

SS 59. Name the three territories acquired by the United States in the Treaty of Paris, 1898.

Answer: Guam, the Philippines, Puerto Rico

MATH 60. Name the conic section which has an eccentricity of one.

Answer: parabola

For the next question you will need this information: Conjunctions are divided into three kinds: coordinating, correlative and subordinating.

ENG 61. Identify the three kinds of conjunctions in the order they occur in the following sentence:

Not only the mayor but also the commissioners had to flee the meeting because several irate citizens and their families began to threaten violence.

Answer: correlative (not only--but also), subordinating (because), coordinating (and)

SCI 62. Match each of the four medical scientists to his contribution.

<u>Medical Scientists</u>	<u>Contributions</u>
1. William Morton	A. use of ether as an anesthetic during surgery
2. Walter Reed	B. discovery of the mosquito as carrier of yellow fever
3. Selman Waksman	C. development of the antibiotic streptomycin
4. Jonas Salk	D. development of the first polio vaccine

Answer: 1-A, 2-B, 3-C, 4-D

For the next question you will receive an art handout (art handout 3-8). Remember, there will be one, three-part question concerning this art handout.

ART 63. This is a three-part question.

- 1. What is the title of the painting?
- 2. Who was the artist?
- 3. An incident in what war inspired the artist to paint the picture?

Answer: 1. Guernica, 2. (Pablo) Picasso, 3. The Spanish Civil War

SCI 64. Compute the normality of HCl if 10.00 milliliters of 0.60 normal NaOH is needed to neutralize 15.00 milliliters of the acid.

Answer: 0.40

HUM 65. Name the German philosopher who explained the universe in terms of the dialectical process.

Answer: (Georg Friedrich) Hegel

End of 15-point round.

Begin 30-point team question.

Read: For this team question you will be given Handout 3-9.

Do not distribute the handouts until you are instructed to do so. This team question is worth 30 points. Each blank is worth 2 points.

You will be given 4 minutes. Please identify one handout as your team answer sheet in the upper left-hand corner.

Begin.

Time 4 minutes.

STOP!

Identify one handout as your team answer sheet and hold it in the air. The judges will correct your work.

Read answers: (two points each)

- | | |
|--------------------------------------|------------------------|
| 1. C | 8. basic |
| 2. (Walt) Whitman | 9. 10 |
| 3. <u>Charlotte's Web</u> | 10. Mohammed |
| 4. Little Miss Muffet | 11. Robert (the) Bruce |
| 5. when first we practice to deceive | 12. Scotland |
| 6. dynamic equilibrium | 13. tarantella |
| (accept: equilibrium) | 14. Mendelssohn |
| 7. scorpion | 15. 2,520 |

Announce scores from team question.

Teams should remain seated until final scores are computed.

Announce scores.

If scores are tied, have a two-minute break before beginning the tie breaker question. Only the teams whose scores are tied will compete.

Tie-breaker questions.

Handout 3-9

Team # _____

Arachnophobia!

1. Which one of the following three spiders does not spin a web to catch its prey?
 - A. black widow
 - B. orbweaver
 - C. tarantula
 2. Name the American poet who wrote "A Noiseless Patient Spider." _____
 3. Give the title of E.B. White's book which has a spider as a major character. _____
 4. Name the character in the nursery rhyme who was frightened away by a spider. _____
 5. Complete the couplet "Oh, what a tangled web we weave, _____
_____."
 6. Fill in the blank. A leaf falls over the dew on a strand of the spider's web. Soon evaporation and condensation occur at the same rate thus setting up a state of _____.
 7. Name the arachnid that has more than two body segments. _____
 8. If a solution has a pH equal to the number of legs on a spider, is it an acidic, basic or neutral solution? _____
 9. If a spider fell from his web and landed 5 meters directly below his original position, to the nearest whole meter per second, what was his final velocity just before hitting the ground? _____
 10. Which prophet of a major religion was saved from his enemies by a spider web spun across the entrance to a cave? _____
- Name the king who was inspired by a spider to try a seventh time to win control of his country from the English and name his country.
11. king _____
 12. country _____
 13. Give the name of a lively, whirling southern Italian dance named for an arachnid. _____
 14. Name the nineteenth century composer of The Spinning Song. _____
 15. How many different permutations can be formed with the letters in the word, spiders? _____