

Game Three

Round 1 - Toss Up

1. Science

What is the term in biology given to the group of animals, including the duckbilled platypus, which are considered mammals, even though they lay eggs?

Monotremes

2. Social Studies

What Spanish explorer became in 1513, the first European to see the Pacific Ocean when he crossed the Isthmus of Panama?

Vasco de Balboa

3. Math (Calculation)

Factor the expression  $4X^2 + 8X + 3$

$(2X + 1)$  times  $(2X + 3)$

4. Literature

What Russian author of the mid-19th century wrote the three stories which are collectively known as the Sevastopol Sketches?

Leo Tolstoy

5. Fine Arts

Name the American composer of popular music who wrote the familiar song "Give My Regards to Broadway."

George M. Cohan

6. Social Studies

Its capital is Fredericton. Name this Canadian province lying on the eastern border of the U.S. state of Maine.

New Brunswick

7. Math (calculation)

Answer the following in Roman numerals: VII + IX + XIV.

XXX

8. Science

What is the term in biology for the incomplete form of cellular respiration in which cells carry out glycolysis, but can not complete the normal breakdown of sugar due to lack of oxygen?

Fermentation

9. Sports

Name the American male tennis star who made a major breakthrough in 1992 by winning the Wimbledon singles tournament after losing in the finals of several previous Grand Slam events.

Andre Agassi

10. Literature

What American poet wrote a group of poems in the nineteenth century which were published in the anthology Drum Taps?

Walt Whitman

11. Math (calculation)

What would be the surface area of a regular rectangular solid which measures 2 inches by 3 inches by 8 inches?

92 Square Inches

12. Language Arts

Potpourri is a French term used in English to refer to a mixture of fragrant flowers and spices. Spell potpourri.

P-O-T-P-O-U-R-R-I

13. Social Studies

The battleship U.S.S. Missouri was the ship honored as the site of the formal signing of surrender documents ending World War II in the Pacific. On what date did this signing occur?

September 2, 1945

14. Science

Give the chemical formula for carbonic acid. Carbon dioxide forms this acid when dissolved in water.

H2 CO3

15. Literature

What war provides the setting for Jean-Paul Sartre's tragic short story The Wall?

Spanish Civil War

Round 2 - Toss Up/Bonus

1. Science

What is the term which geologists give to the huge circle of volcanic and earthquake-prone areas which surrounds the Pacific Ocean?

Ring of Fire

Bonus 1 - Math

Convert the following degree measures to radians:

1. 20 degrees -  $\pi/9$
2. 36 degrees -  $\pi/5$
3. 135 degrees -  $3\pi/4$
4. 15 degrees -  $\pi/12$

2. Social Studies

Although most deserts are sandy, in what country would you be if you were in the desert known as the Great Sandy Desert?

Australia

Bonus 2 - Science

Name the cell parts which described by the following:

1. Site of protein synthesis - Ribosome
2. Site of photosynthesis - Chloroplast
3. Site of cellular respiration - Mitochondria
4. Organelle to store food and water - Vacuole

3. Literature

In what 1811 Jane Austen novel do you meet the characters Elinor and Marianne Dashwood who are each deserted by young men whom they had planned to marry?

Sense and Sensibility

Bonus 3 - Fine Arts

Name the original nationalities of the following artists:

1. John Constable - English
2. Marc Chagall - Russian
3. Salvador Dali - Spanish
4. Rembrandt van Ryn - Dutch

4. Math (calculation)

What would be the volume of a cube whose sides have a surface area of 96 square inches?

64 Cubic Inches

Bonus 4 - Literature

Name the poets who wrote the following poems:

1. "Lenore" - Edgar Allen Poe
2. "Fog" - Carl Sandburg
3. "Spontaneous Me" - Walt Whitman
4. "Snowbound" - John Greenleaf Whittier

5. Health

What organ near the human liver has the primary function of storing bile until it is needed by the intestine?

Gall Bladder

Bonus 5 - Social Studies

Name the years in which the following events occurred:

1. Battle of Hastings - 1066
2. First nuclear bomb exploded - 1945
3. The Moors were conquered in Spain - 1492
4. Battle of Chancellorsville - 1863

clue (always read as Battle of Hastings)  
clue, as opposed to 732 Battle of Tours, which probably would read "Charles Martel defeated Moors"

6. Fine Arts

What classification of female voice has a range from middle C upward for two octaves?

Soprano

Bonus 6 - Health

Name the human endocrine glands in which the following hormones are produced:

1. Growth Hormone - Pituitary Gland
2. Epinephrine - Adrenal Glands
3. Calcitonin - Thyroid Gland
4. Progesterone - Ovaries

7. Social Studies

In psychology, what is the more commonly used term for the condition commonly known as a bipolar disorder?

Manic Depression

Bonus 7 - Math

Give the first derivatives of the following expressions:

1.  $5X^3 - 17X^2 + X - 15X^2 - 34X + 1$
2. Sine X - Cosine X
3. Cosine X - Negative sine X
4.  $6X^4 - 3X^3 + 5 - 24X^3 - 9X^2$  or  $3(8X^3 - 3X^2)$

8. Science

Name the German scientist who is credited with the 1895 discovery of X-rays.

Wilhelm Roentgen

Bonus 8 - Literature

Name the U.S. states which served as the settings for the following novels:

1. The Last of the Mohicans - New York
2. East of Eden - California
3. The Scarlet Letter - Massachusetts
4. You Can't Go Home Again - North Carolina

Thomas Wolfe from Asheville, NC

9. Math

If an angle is in the first quadrant of a Cartesian plane and the cosine of the angle is  $\frac{3}{5}$ , what is the sine of the angle?

$\frac{4}{5}$

Bonus 9 - Social Studies

Name the U.S. states which have the following mountains as their highest points:

1. Mount Whitney - California
2. Mount Katahdin - Maine
3. Mount Hood - Oregon
4. Mount Elbert - Colorado

Top and Appalachian Trail

10. Literature

What popular novelist is the author of the thrillers The Fourth Protocol, The Day of the Jackal, and The Dogs of War?

The Odessa File  
Frederick Forsyth

Bonus 10 - Science

Give the chemical formulas for the following:

1. Nitric Acid -  $HNO_3$
2. Barium Sulfate -  $BaSO_4$
3. Hydrobromic Acid -  $HBr$
4. Acetylene -  $C_2H_2$

Round 3 - Toss Up

1. Social Studies

What was the name given to the wars fought between 1455 and 1485 in England for control of the English throne?

Wars of the Roses

2. Math (Calculation)

Name the five consecutive integers whose sum is 115.

21, 22, 23, 24, 25

3. Literature

What American author wrote the 1938 story The Short Happy Life of Francis Macomber, set on a safari in Africa?

Ernest Hemingway

4. Science

In an alphabetical listing, what chemical element would appear last?

Zirconium

5. Language Arts

What is the term in grammar given to the tenses of a verb which are used to talk about an action which occurs at one given time, but which is seen in relationship to another time?

Perfect Tenses

6. Math (calculation)

Jim has made grades of 87, 91, 85, and 92 on his first four tests in geometry. What grade must he make on his next test to have an average of 90?

95

7. Social Studies

Although there are several active volcanoes on islands in the Mediterranean Sea, what is the only active volcano on the European mainland?

Mount Vesuvius

8. Science

What is the term in chemistry for the general type of chemical bond in which one atom shares some of its outer electrons with one or more other atoms?

Covalent Bond

9. Literature

In Jonathan Swift's Gulliver's Travels, name the flying island which Gulliver finds inhabited by abstract philosophers who are ill equipped for living in society.

Laputa

10. Fine Arts

What is the term in art used to refer to a work composed of a variety of materials, such as wood, cloth, newspaper, or photographs?

Collage

11. Math (calculation)

In a given right triangle, the side opposite a 30 degree angle has a length of 2. What is the length of the hypotenuse of this triangle?

4

12. Science

What is the term in botany for the tissue in a plant which carries water up from the roots?

Xylem

13. Driver's Education

U.S. traffic signs have been standardized to certain specific shapes. What is the geometric shape of a "school zone" sign?

Pentagon

14. Literature

What English author created the character of Becky Sharp, an unprincipled and selfish girl, in his famous novel Vanity Fair?

William M. Thackeray

*subtle: novel without a hero (hero is a heroine!)*

15. Social Studies

Name the English king, a Lancastrian, who led a rebellion against Richard II in 1399 and claimed the throne for himself?

Henry IV

Round 4 - Toss Up/Bonus

1. Literature

Name the wife of William Shakespeare. She bore him three children.

Anne Hathaway

Bonus 1 - Social Studies

Name the U.S. presidents who succeeded each of the following men in office:

1. Thomas Jefferson - James Madison
2. Herbert Hoover - Franklin Roosevelt
3. Andrew Jackson - Martin Van Buren
4. Chester Arthur - Grover Cleveland

2. Math (calculation)

Find the value of 7 factorial divided by 3 factorial.

840

Bonus 2 - Science

Tell what is measured by each of the following units:

1. Decibels - Loudness of Sound
2. Ohms - Electrical Resistance
3. Watts - Power
4. Amperes - Electrical Current

3. Science

Mechanical digestion in humans is done in the mouth by chewing. In what organ in birds is mechanical digestion accomplished?

Gizzard

Bonus 3 - Language Arts

Give the meanings of the following Greek roots:

1. Hemi - Half
2. Pseud - False
3. Pyr - Fire
4. Odont - Tooth

#### 4. Social Studies

In psychology, what is the term given to an acute feeling of sadness and loss experienced by some women within a few months of childbirth?

Postpartum Depression

#### Bonus 4 - Sports

Name the major league baseball teams who won the World Series in the following years:

1. 1991 - Minnesota Twins
2. 1986 - New York Mets
3. 1961 - New York Yankees
4. 1984 - Detroit Tigers

#### 5. Language Arts

What is the term in grammar given to words which introduce a word phrase ending in a noun or pronoun, such as the word "in" in the sentence "The children are in their beds."?

Prepositions

#### Bonus 5 - Math (calculation)

Convert the following Roman numerals to base ten numbers:

- |               |                  |
|---------------|------------------|
| 1. CDXL - 440 | 3. MCMXLI - 1941 |
| 2. LXVII - 67 | 4. DCLXXI - 671  |

#### 6. Math

Three fair coins are flipped together. What is the chance, expressed as a fraction in lowest terms, that the coins will all land on heads?

$\frac{1}{8}$

#### Bonus 6 - Science

Name the astronomical constellations which are described by the following:

1. It represents a bull - Taurus
2. It is commonly known as the Big Dipper - Ursa Major
3. It contains the nearest spiral galaxy to our own - Andromeda
4. It contains the bright star Antares - Scorpio

#### 7. Health

What is the term for the small cell fragments in blood which cause the clotting of blood in the event of injury?

Platelets

Bonus 7 - Literature

Name the novels in which you meet the following characters:

1. Catherine Linton - Wuthering Heights
2. Phoebe Caulfield - The Catcher in the Rye
3. Ishmael and Queequeg - Moby Dick
4. Hepzibah Pyncheon - The House of Seven Gables

(of Heathcliff!)

8. Science

What group of biochemical compounds is represented by such examples as alanine, valine, proline, and leucine?

Amino Acids

Bonus 8 - Social Studies

Name the holidays which occur on the following dates each year:

1. March 17 - St. Patrick's Day
2. June 14 - Flag Day
3. January 15 - Martin Luther King, Jr.'s Birthday
4. November 11 - Veteran's Day (accept Armistice Day)

9. Literature

Name the English novelist who wrote of the Normans and Saxons in the days of Richard I in his 1819 novel Ivanhoe.

Walter Scott

Bonus 9 - Math

Give the values of the following trigonometric functions:

1. Cosine of 60 degrees -  $1/2$
2. Sine of 90 degrees - 1
3. Cosine of 30 degrees - Square root of 3 over 2
4. Cosine of 45 degrees - 1 over square root of 2

10. Social Studies

What twentieth century historical figure made the statement "France has lost a battle. But France has not lost the war."? This statement was made early in the Second World War.

Charles de Gaulle

Bonus 10 - Literature

Name the authors of the following works:

1. Robinson Crusoe - Daniel Defoe
2. Jane Eyre - Charlotte Bronte
3. Lord Jim - Joseph Conrad
4. The Once and Future King - T.H. White

about Arthur!

Replacement Questions - Round 3

Toss Up

Science

What is the term given to a chemical which can control the rate of a reaction without being used in the reaction itself?

Catalyst

Math

Name the next two lowest prime numbers above 100.

101, 103

Social Studies

Name the only national park located inside the state of Oregon.

Crater Lake National Park

Literature

Name the English poet whose fame rests almost solely with the 1896 collection A Shropshire Lad.

A.E. Housman

Fine Arts

What famous Italian composer wrote the popular opera The Barber of Seville?

*based on Beaumarchais*

Gioacchino Rossini

Language

What is the grammatical term given to a repetition of consonant sounds in a series of words?

Alliteration

Misc-Sports

Name the two major league baseball teams who play their home games in the state of Ohio.

Cleveland Indians and Cincinnati Reds

Bonus

Science

List the four largest moons of Jupiter. They are named for mythological characters associated with Jupiter or Zeus.

Ganymede, Callisto, Europa, Io

### Math (calculation)

Factor the following expressions:

1.  $X^2 + X - 12$  - (X - 3) times (X + 4)
2.  $2X^2 - 11X + 12$  - (2X - 3) times (X - 4)
3.  $12X^2 - 7X - 10$  - (3X + 2) times (4X - 5)
4.  $X^3 + X^2 - X - 1$  - (X + 1) times (X + 1) times (X - 1)

### Social Studies

Name the U.S. presidents who succeeded the following presidents in office:

1. James Buchanan - Abraham Lincoln
2. James K. Polk - Zachary Taylor
3. Warren Harding - Calvin Coolidge
4. Martin Van Buren - William Henry Harrison

### Literature

Name the authors of the following works:

1. Two Years Before the Mast - Richard Henry Dana, Jr.
2. Death of a Salesman - Arthur Miller
3. Tobacco Road - Erskine Caldwell
4. The Color Purple - Alice Walker

### Fine Arts

Name the artists who created the following works:

1. Sunflowers - Vincent Van Gogh
2. Madonna of the Magnificat - Sandro Botticelli
3. The Land of Cockayne - Pieter Bruegel
4. Racehorses at Longchamp - Edgar Degas

### Language

Give the meanings of the following Greek roots:

- |               |                            |
|---------------|----------------------------|
| 1. Neo - New  | 2. Tele - Far (or distant) |
| 3. Pod - Foot | 4. Melo - Song             |

### Misc-Sports

For what NFL teams did the following players compete in their careers:

1. Walter Payton - Chicago Bears
2. Steve Largent - Seattle Seahawks
3. Franco Harris - Pittsburgh Steelers
4. Len Dawson - Kansas City Chiefs