

# SAMPLE ROUND

## HIGH SCHOOL/ BONUS FORMAT

**1) TOSS-UP. 10 points.**

From time to time, a country allows political refugees to remain within its boundaries as protection from persecution or oppression. What six-letter noun describes this state of existence?

**Answer: asylum**

**1) BONUS. 20 points. 5 points each.**

Identify each term associated with government proceedings.

- 1) The return of a criminal to a state in which an original crime was committed
- 2) Another name for a pardon granted by a government to an individual or group
- 3) Two-word name that refers to an individual who refuses to follow a government directive to serve in the military based on his religious or moral beliefs
- 4) Legal term for a court order that either forbids or requires a certain action

**Answer:**

- 1) **extradition**
- 2) **amnesty**
- 3) **conscientious objector**
- 4) **injunction**

**2) TOSS-UP. 10 points.**

If  $3^{(2x+1)} = 27^{(4/3)}$ , (read: three to the  $2x + 1$  power equals 27 to the  $4/3$  power) what is the value of  $x$ ?

**Answer: 3/2 or 1.5**

**2) BONUS. 20 points. 5 points each.**

- 1) Find the geometric mean of 7 and 21. Express your answer in simplest radical form.
- 2) Crew A can complete a job in 8 hours, and Crew B can do the same job in 12 hours. If Crew C helps, the three crews together can complete the job in 3 hours. How long would it take Crew C to complete the job working alone?
- 3) In how many ways can a 5 member committee be selected if 8 people are available to serve?
- 4) A box contains 4 white and 8 blue marbles. Two marbles are drawn, with the first replaced before the second is drawn. What is the probability of drawing a blue and a white?

**Answer:**

- 1) 7 radical 3 or 7 times the square root of 3
- 2) 8 hours
- 3) 56
- 4) 4/9

**3) TOSS-UP. 10 points.**

Which U.S. cultural icon represented the American women who worked in factories producing munitions and war supplies during World War II?

**Answer: Rosie the Riveter**

**3) BONUS. 20 points. 5 points each.**

Identify each symbolic figure or icon from the description provided.

- 1) An elderly, bearded man wearing a robe and sash across his chest, carrying an hourglass
- 2) Skeletal figure carrying a scythe, clothed in hooded black robe
- 3) Statuesque female who is wearing a blind fold, and carrying scales in her left hand, and a double edge sword in her right
- 4) In British Isles folklore, an elfish creature who personifies crisp, cold weather

**Answer:**

- 1) **Father Time**
- 2) **Grim Reaper (death)**
- 3) **Lady Justice**
- 4) **Jack Frost**

**4) TOSS-UP. 10 points.**

Identify the hypothetical force of repulsion that has been described in science fiction, but has not been observed by scientists as of yet. This force would cause objects to repel each other rather than be attracted to one another.

**Answer: antigravity**

**4) BONUS. 20 points. 5 points each.**

- 1) “Up”, “Down”, “Charm”, “Strange”, “Top”, and “Bottom” are all forms of which physical quantity?
- 2) Which two types of quarks have the lowest masses?
- 3) What name is given to quarks that combine to form composite particles?
- 4) Identify the phenomenon that prevents quarks from being found in isolation.

**Answer:**

- 1) **quarks**
- 2) **Up and Down**
- 3) **hadrons**
- 4) **color confinement**

**5) TOSS-UP. 10 points.**

In Jules Verne’s *Around the World in Eighty Days*, which wealthy English gentleman spends most of his days at the Reform Club reading, taking his meals, and playing whist, before he is challenged by his whist partners to prove that he can travel the world in eighty days?

**Answer: Phileas Fogg**

**5) BONUS. 20 points. 5 points each.**

Identify each well-known character from world literature.

- 1) Don Quixote’s side kick
- 2) The only one of King Lear’s daughters who is sincere about her love for him
- 3) Cruel slave dealer in Harriet Beecher Stowe’s *Uncle Tom’s Cabin*
- 4) Ichabod Crane’s chief rival for the love of a young lady

**Answer:**

- 1) **Sancho Panza**
- 2) **Cordelia**
- 3) **Simon Legree**
- 4) **Brom Bones**

**6) TOSS-UP. 10 points.**

Signed by 160 countries in 1997, and entered into force in 2005, which international agreement was designed to reduce worldwide emissions of greenhouse gases?

**Answer: Kyoto Protocol**

**6) BONUS. 20 points. 5 points each.**

- 1) In which layer of a leaf does most photosynthesis take place?
- 2) Identify the four main parts of a flower.
- 3) By what name is an underground stem that produces new leaves and roots known?
- 4) Of fossil fuels, rice, fertilizer, and sewage, which of these is NOT a source of methane?

**Answer:**

- 1) palisade
- 2) sepals, petals, stamen and pistil
- 3) rhizome
- 4) fertilizer