

# 2024 Academic Super Bowl

## Junior Math

### Final Study Guide

#### The 1980's and 1990's



- I. Exponents - 30%
  - A. Laws of Exponents
  - B. Rational Exponents
  - C. Negative Exponents
  - D. Exponential Equations
  - E. Graphs of Exponential Functions
  - F. Appreciation / Depreciation
  
- II. Rational Expressions, Equations, and Functions - 30%
  - A. Simplify Rational Expressions
  - B. Solve Rational Equations
    - 1. Extraneous Solutions
  - C. Graphs of Rational Functions
    - 1. Vertical Asymptote
    - 2. Horizontal Asymptote
    - 3. Removable Discontinuity
  
- III. Inverse Functions - 20%
  - A. Linear, Quadratic
  - B. Find Inverse Function
  - C. Graphs of Inverse Functions
  - D. Characteristics of Inverse Functions
    - 1. Domain, Range
    - 2. Slope
    - 3. Reflection
  
- IV. Composition of Functions - 20%
  - A. Find Composition of Functions
  - B. Evaluate Composition of Functions
  - C. Domain, Range

Study Outlines are developed from ideas submitted by coaches and question writers.

Please email ideas for the 2025 contest, Ireland, to Jill Slinker at [jslinker@iasp.org](mailto:jslinker@iasp.org)

# 2024 Academic Super Bowl

## Junior Science

### Final Study Guide

#### The 1980's and 1990's



- I. Astronomy - approximately 30%
  - A. The Space Shuttle (development, design, flight procedures, important missions)
  - B. Hubble Telescope (development, design, space exploration)
  - C. Stars (types, life cycle, classification, basic location and identification)
  
- II. Genetics - approximately 30%
  - A. Human Genome Project (goals, uses, basic procedures, techniques, terminology)
  - B. H.I.V. and AIDS (The AIDS virus structure/replication, epidemiology, disease treatment)
  
- III. Disasters - approximately 30%
  - A. Natural/man assisted
    - 1. Volcanoes: Mount St. Helens (eruption related stats, volcano morphology, ecological impacts)
    - 2. Chernobyl (nuclear power basics, disaster related events and consequences)
    - 3. Storms (hurricane formation and characteristics; Hurricane Andrew stats)
  
- IV. Technology - approximately 10%
  - 1. Computers (advances in technology that contributed to personal computers)

(see expanded Jr Science Study Guide for sources)

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# 2024 Academic Super Bowl

## Junior Social Studies

### Final Study Guide

#### The 1980's and 1990's



- I. American Presidents of the Late 20th Century
  - A. Ronald Reagan - 30%
    1. Early and adult life before 1980 Presidential Election
    2. 1980 and 1984 Presidential Elections
    3. Reagan's First Inaugural Addresses
    4. Presidency
    5. Post-Presidency
    6. Mikhail Gorbachev
    7. Nancy Reagan
  - B. George H. W. Bush - 19%
    1. Early and adult life before 1988 Presidential Election
    2. 1988 Presidential Election
    3. Excerpt from 1990 Address to Congress on the Crisis in Kuwait
    4. H. Ross Perot
    5. Barbara Bush
  - C. Bill Clinton - 32%
    1. Early and adult life before 1992 Presidential Election
    2. 1992 and 1996 Presidential Elections
    3. Excerpt from Clinton's Final State of the Union Address
    4. Al Gore Jr., Madeleine Albright, Janet Reno, and Alan Greenspan
    5. Hillary Clinton
    6. Impeachment
  - D. George W. Bush - 19%
    1. Early and adult life before 2000 Presidential Election
    2. 2000 Presidential Election
    3. Dick Cheney
    4. Laura Bush
    5. The Electoral College System

Source: The Presidents Fact Book by Roger Matus; Black Dog & Leventhal Publishers, 2021, ISBN 978-0-7624-7844-6; Revised and updated by Bill Harris and Thomas J. Craughwell  
\*Ronald Reagan, George H. W. Bush, Bill Clinton & Impeachment (pp. 672-736)  
\*George W. Bush and The Electoral College System (pp. 737-748, 759-763)

2024 Academic Super Bowl  
Junior English  
Final Study Guide  
The 1980's and 1990's



- I. Harry Potter and the Sorcerer's Stone by J. K. Rowling - 60%
- A. [Harry Potter at Vox](#)
  - B. [Harry Potter Part I at the Leaky Cauldron](#)
  - C. [Harry Potter Part II at the Leaky Cauldron](#)
  - D. [Harry Potter Part III at the Leaky Cauldron](#)
  - E. [Harry Potter at Geeks](#)
- II. Selections from The Wild Iris by Louise Gluck - 40%
- A. ["The Wild Iris"](#) (At the end of my suffering)
  - B. ["Matins"](#) (The sun shines; by the mailbox, leaves)
  - C. "Spring Snow" (Look at the night sky)
  - D. "Matins" (I see it is with you as it with the birches)
  - E. "The Garden" (I couldn't do it again)
  - F. "April" (No one's despair is like my despair-)
  - G. "Matins" (You want to know how I spend my time?)
  - H. ["The Red Poppy"](#) (The great thing)
  - I. "Early Darkness" (How can you say)
  - J. "Retreating Light" (You were like very young children)

Reading of above selections on YouTube: <https://www.youtube.com/watch?v=6f1BdnZY90w>

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