

Trick Question or Stupid Question?

August 7, 2023

Trick Question or Stupid Question?

Trick Question or Stupid Question?

1. I will project a set of questions.

Trick Question or Stupid Question?

1. I will project a set of questions.
2. You will, in a small group, try to figure out answers.

Trick Question or Stupid Question?

1. I will project a set of questions.
2. You will, in a small group, try to figure out answers.
3. I will then give the answers.

Trick Question or Stupid Question?

1. I will project a set of questions.
2. You will, in a small group, try to figure out answers.
3. I will then give the answers.
4. When I do, for each question, we will vote:
 - ▶ **Trick Question**
 - ▶ **Stupid Question**

Trick Question or Stupid Question?

1. I will project a set of questions.
2. You will, in a small group, try to figure out answers.
3. I will then give the answers.
4. When I do, for each question, we will vote:
 - ▶ **Trick Question**
 - ▶ **Stupid Question**
5. We will do this several times- there will be SIX SETS of questions.

Trick Question or Stupid Question? PART I

1. What is the least common birthday in America?
2. What US state has the easternmost point in America?
3. What is the least common first names for a U.S. President as of summer 2023?

Answer to PART I, Q1

What is the least common birthday in America?

Answer to PART I, Q1

What is the least common birthday in America?

CORRECT ANS Feb 29.

Answer to PART I, Q1

What is the least common birthday in America?

CORRECT ANS Feb 29.

VOTE Trick or Stupid?

Answer to PART I, Q1

What is the least common birthday in America?

CORRECT ANS Feb 29.

VOTE Trick or Stupid?

MISC Second Least: Dec 25.

Answer to PART I, Q1

What is the least common birthday in America?

CORRECT ANS Feb 29.

VOTE Trick or Stupid?

MISC Second Least: Dec 25.

MISC Most common: Sept 16. 9 months after Holiday Season.

Answer to PART I, Q2

What US state has the easternmost point in America?

Answer to PART I, Q2

What US state has the easternmost point in America?

COMMON ANS Maine (Quoddy Head Maine).

Answer to PART I, Q2

What US state has the easternmost point in America?

COMMON ANS Maine (Quoddy Head Maine).

CORRECT ANS Alaska (Cape Wrangell Alaska). The Prime Meridian is just east of Alaska's Islands so the easternmost point in America is in Alaska.

Answer to PART I, Q2

What US state has the easternmost point in America?

COMMON ANS Maine (Quoddy Head Maine).

CORRECT ANS Alaska (Cape Wrangell Alaska). The Prime Meridian is just east of Alaska's Islands so the easternmost point in America is in Alaska.

VOTE Trick or Stupid?

Answer to PART I, Q2

What US state has the easternmost point in America?

COMMON ANS Maine (Quoddy Head Maine).

CORRECT ANS Alaska (Cape Wrangell Alaska). The Prime Meridian is just east of Alaska's Islands so the easternmost point in America is in Alaska.

VOTE Trick or Stupid?

MY OPINION Using the Prime Meridian to define East and West this precisely is stupid.

Answer to PART I, Q3

What is the least common first name for a U.S. President as of Summer 2022?

Answer to PART I, Q3

What is the least common first name for a U.S. President as of Summer 2022?

COMMON ANS The following presidents have a unique first name among presidents: Thomas Jefferson, Martin Van Buren, Zachery Taylor, Millard Fillmore, Abraham Lincoln, Ulysses Grant, Rutherford Hayes, Chester Arthur, Grover Cleveland, Benjamin Harrison, Theodore Roosevelt, Woodrow Wilson, Warren Harding, Calvin Coolidge, Herbert Hoover, Harry Truman, Dwight Eisenhower, Lyndon Johnson, Richard Nixon, Gerald Ford, Ronald Reagan, Barack Obama, Donald Trump, Joe Biden.

Answer to PART I, Q3

What is the least common first name for a U.S. President as of Summer 2022?

COMMON ANS The following presidents have a unique first name among presidents: Thomas Jefferson, Martin Van Buren, Zachery Taylor, Millard Fillmore, Abraham Lincoln, Ulysses Grant, Rutherford Hayes, Chester Arthur, Grover Cleveland, Benjamin Harrison, Theodore Roosevelt, Woodrow Wilson, Warren Harding, Calvin Coolidge, Herbert Hoover, Harry Truman, Dwight Eisenhower, Lyndon Johnson, Richard Nixon, Gerald Ford, Ronald Reagan, Barack Obama, Donald Trump, Joe Biden.

CORRECT ANS All of the names that no president had are tied.

Answer to PART I, Q3

What is the least common first name for a U.S. President as of Summer 2022?

COMMON ANS The following presidents have a unique first name among presidents: Thomas Jefferson, Martin Van Buren, Zachery Taylor, Millard Fillmore, Abraham Lincoln, Ulysses Grant, Rutherford Hayes, Chester Arthur, Grover Cleveland, Benjamin Harrison, Theodore Roosevelt, Woodrow Wilson, Warren Harding, Calvin Coolidge, Herbert Hoover, Harry Truman, Dwight Eisenhower, Lyndon Johnson, Richard Nixon, Gerald Ford, Ronald Reagan, Barack Obama, Donald Trump, Joe Biden.

CORRECT ANS All of the names that no president had are tied.

VOTE Trick or Stupid?

Misc Facts, NOT Trick vs Stupid

What is the **most common first name** for a president?

Misc Facts, NOT Trick vs Stupid

What is the **most common first name** for a president?

1. James 6: Madison, Monroe, Polk, Buchanan, Garfield, “Jimmy” Carter.
2. John 4: Adams, Quincy Adams, Tyler, Kennedy
3. Bill 3: William Henry Harrison, William H. Taft, Bill Clinton.
4. George 3: George Washington, George H.W. Bush, George W. Bush.
5. Andrew 2: Andrew Jackson, Andrew Johnson

Misc Facts, NOT Trick vs Stupid

What is the **most common first name** for a president?

1. James 6: Madison, Monroe, Polk, Buchanan, Garfield, “Jimmy” Carter.
2. John 4: Adams, Quincy Adams, Tyler, Kennedy
3. Bill 3: William Henry Harrison, William H. Taft, Bill Clinton.
4. George 3: George Washington, George H.W. Bush, George W. Bush.
5. Andrew 2: Andrew Jackson, Andrew Johnson

What is the **most common last name** for a president?

Misc Facts, NOT Trick vs Stupid

What is the **most common first name** for a president?

1. James 6: Madison, Monroe, Polk, Buchanan, Garfield, “Jimmy” Carter.
2. John 4: Adams, Quincy Adams, Tyler, Kennedy
3. Bill 3: William Henry Harrison, William H. Taft, Bill Clinton.
4. George 3: George Washington, George H.W. Bush, George W. Bush.
5. Andrew 2: Andrew Jackson, Andrew Johnson

What is the **most common last name** for a president?

1. Adams: John Adams and John Quincy Adams.
2. Johnson: Andrew Johnson and Lyndon B Johnson.
3. Harrison: William Henry Harrison and Benjamin Harrison,
4. Roosevelt: Theodore and Franklin: Fifth Cousins. (They knew and liked each other. Do you know your fifth cousin?)
5. Bush: George H.W. and George W.

Trick Question or Stupid Question? PART II

1. An expert on tracking animals notices one day that there are bear tracks and rabbit tracks converging. He can estimate that they met at 6:00PM with a margin of error of 17 seconds. Hence they must have been there at the same time. He also notices that from the spot they met only rabbit tracks can be seen leaving that point. There are some bear bones in the area. **HOW CAN A RABBIT EAT A BEAR FOR DINNER?**
2. The following quote is from the back of a book that I dusted off and took off my shelf recently: **FORTRAN is one of the oldest high-level languages and remains the premier language for writing code for science and engineering applications.** What year was the book written? If you come within five years then you get it right.

Answer to PART II, Q1

An expert on tracking animals notices one day that there are bear tracks and rabbit tracks converging. He can estimate that they met at 6:00PM with a margin of error of 17 seconds. Hence they must have been there at the same time. He also notices that from the spot they met only rabbit tracks can be seen leaving that point. There are some bear bones in the area. **HOW CAN A RABBIT EAT A BEAR FOR DINNER?**

Answer to PART II, Q1

An expert on tracking animals notices one day that there are bear tracks and rabbit tracks converging. He can estimate that they met at 6:00PM with a margin of error of 17 seconds. Hence they must have been there at the same time. He also notices that from the spot they met only rabbit tracks can be seen leaving that point. There are some bear bones in the area. **HOW CAN A RABBIT EAT A BEAR FOR DINNER?**

THE RABBIT SKIPPED BREAKFAST AND LUNCH!

Answer to PART II, Q1

An expert on tracking animals notices one day that there are bear tracks and rabbit tracks converging. He can estimate that they met at 6:00PM with a margin of error of 17 seconds. Hence they must have been there at the same time. He also notices that from the spot they met only rabbit tracks can be seen leaving that point. There are some bear bones in the area. **HOW CAN A RABBIT EAT A BEAR FOR DINNER?**

THE RABBIT SKIPPED BREAKFAST AND LUNCH!

VOTE Trick or Stupid?

Answer to PART II, Q1

An expert on tracking animals notices one day that there are bear tracks and rabbit tracks converging. He can estimate that they met at 6:00PM with a margin of error of 17 seconds. Hence they must have been there at the same time. He also notices that from the spot they met only rabbit tracks can be seen leaving that point. There are some bear bones in the area. **HOW CAN A RABBIT EAT A BEAR FOR DINNER?**

THE RABBIT SKIPPED BREAKFAST AND LUNCH!

VOTE Trick or Stupid?

When I first saw this I was amused.

Answer to PART II, Q1

An expert on tracking animals notices one day that there are bear tracks and rabbit tracks converging. He can estimate that they met at 6:00PM with a margin of error of 17 seconds. Hence they must have been there at the same time. He also notices that from the spot they met only rabbit tracks can be seen leaving that point. There are some bear bones in the area. **HOW CAN A RABBIT EAT A BEAR FOR DINNER?**

THE RABBIT SKIPPED BREAKFAST AND LUNCH!

VOTE Trick or Stupid?

When I first saw this I was amused. I was young.

Answer to PART II, Q1

An expert on tracking animals notices one day that there are bear tracks and rabbit tracks converging. He can estimate that they met at 6:00PM with a margin of error of 17 seconds. Hence they must have been there at the same time. He also notices that from the spot they met only rabbit tracks can be seen leaving that point. There are some bear bones in the area. **HOW CAN A RABBIT EAT A BEAR FOR DINNER?**

THE RABBIT SKIPPED BREAKFAST AND LUNCH!

VOTE Trick or Stupid?

When I first saw this I was amused. I was young. I was 50.

Answer to PART II, Q2

The following quote is from the back of a book that I dusted off and took off my shelf recently: **FORTRAN is one of the oldest high-level languages and remains the premier language for writing code for science and engineering applications.** What year was the book written? If you come within five years then you get it right.

Answer to PART II, Q2

The following quote is from the back of a book that I dusted off and took off my shelf recently: **FORTRAN is one of the oldest high-level languages and remains the premier language for writing code for science and engineering applications.** What year was the book written? If you come within five years then you get it right.

COMMON ANS Fortran has not been *the premier language for writing code for science and engineering applications* for a very long time, and you had to dust it off, so early 1970's.

Answer to PART II, Q2

The following quote is from the back of a book that I dusted off and took off my shelf recently: **FORTRAN is one of the oldest high-level languages and remains the premier language for writing code for science and engineering applications.** What year was the book written? If you come within five years then you get it right.

COMMON ANS Fortran has not been *the premier language for writing code for science and engineering applications* for a very long time, and you had to dust it off, so early 1970's.

CORRECT ANS Book is *Modern Fortran* by Clerman and Spector, 2012.

Answer to PART II, Q2

The following quote is from the back of a book that I dusted off and took off my shelf recently: **FORTRAN is one of the oldest high-level languages and remains the premier language for writing code for science and engineering applications.** What year was the book written? If you come within five years then you get it right.

COMMON ANS Fortran has not been *the premier language for writing code for science and engineering applications* for a very long time, and you had to dust it off, so early 1970's.

CORRECT ANS Book is *Modern Fortran* by Clerman and Spector, 2012. I should dust more often.

Answer to PART II, Q2

The following quote is from the back of a book that I dusted off and took off my shelf recently: **FORTRAN is one of the oldest high-level languages and remains the premier language for writing code for science and engineering applications.** What year was the book written? If you come within five years then you get it right.

COMMON ANS Fortran has not been *the premier language for writing code for science and engineering applications* for a very long time, and you had to dust it off, so early 1970's.

CORRECT ANS Book is *Modern Fortran* by Clerman and Spector, 2012. I should dust more often.

VOTE Trick or Stupid?

Answer to PART II, Q2

The following quote is from the back of a book that I dusted off and took off my shelf recently: **FORTRAN is one of the oldest high-level languages and remains the premier language for writing code for science and engineering applications.** What year was the book written? If you come within five years then you get it right.

COMMON ANS Fortran has not been *the premier language for writing code for science and engineering applications* for a very long time, and you had to dust it off, so early 1970's.

CORRECT ANS Book is *Modern Fortran* by Clerman and Spector, 2012. I should dust more often.

VOTE Trick or Stupid?

MY 2CENTS The back of the book is incorrect.

Trick Question or Stupid Question? PART III

1. What are the next two numbers in the sequence below?

2, 4, 6, 30, 32, 34, 36, 40, 42, 44, 46, 50, 52, 54, 56, 60, 62, 64, ...

2. You have 6 blue socks, 8 white socks, and 10 black socks in a drawer. You take them out of the drawer randomly, one at a time. How many do you need to take out in order to ensure that you have a pair?
3. What is the degree of $(x - a)(x - b)(x - c) \cdots (x - z)$?

Answer to PART III, Q1

What are the next two numbers in the sequence below?

2, 4, 6, 30, 32, 34, 36, 40, 42, 44, 46, 50, 52, 54, 56, 60, 62, 64, ...

Answer to PART III, Q1

What are the next two numbers in the sequence below?

2, 4, 6, 30, 32, 34, 36, 40, 42, 44, 46, 50, 52, 54, 56, 60, 62, 64, ...

COMMON ANS ???

Answer to PART III, Q1

What are the next two numbers in the sequence below?

2, 4, 6, 30, 32, 34, 36, 40, 42, 44, 46, 50, 52, 54, 56, 60, 62, 64, ...

COMMON ANS ???

CORRECT ANS The sequence is all numbers that, when written in English, do not have an e in them. Answer is 66 and 2000

Answer to PART III, Q1

What are the next two numbers in the sequence below?

2, 4, 6, 30, 32, 34, 36, 40, 42, 44, 46, 50, 52, 54, 56, 60, 62, 64, ...

COMMON ANS ???

CORRECT ANS The sequence is all numbers that, when written in English, do not have an e in them. Answer is 66 and 2000

VOTE Trick or Stupid

Answer to PART III, Q2

You have 6 blue socks, 8 white socks, and 10 black socks in a drawer. You take them out of the drawer randomly, one at a time. How many do you need to take out in order to ensure that you have a pair?

Answer to PART III, Q2

You have 6 blue socks, 8 white socks, and 10 black socks in a drawer. You take them out of the drawer randomly, one at a time. How many do you need to take out in order to ensure that you have a pair?

COMMON ANS 4.

Answer to PART III, Q2

You have 6 blue socks, 8 white socks, and 10 black socks in a drawer. You take them out of the drawer randomly, one at a time. How many do you need to take out in order to ensure that you have a pair?

COMMON ANS 4.

CORRECT ANS 2. As soon as you take two out you have a pair. The problem does not say that the socks have to be the same color.

Answer to PART III, Q2

You have 6 blue socks, 8 white socks, and 10 black socks in a drawer. You take them out of the drawer randomly, one at a time. How many do you need to take out in order to ensure that you have a pair?

COMMON ANS 4.

CORRECT ANS 2. As soon as you take two out you have a pair. The problem does not say that the socks have to be the same color.

VOTE Trick or Stupid?

Answer to PART III, Q3

What is the degree of $(x - a)(x - b)(x - c) \cdots (x - z)$?

Answer to PART III, Q3

What is the degree of $(x - a)(x - b)(x - c) \cdots (x - z)$?

COMMON ANS 26.

Answer to PART III, Q3

What is the degree of $(x - a)(x - b)(x - c) \cdots (x - z)$?

COMMON ANS 26.

CORRECT ANS 0. Note that the poly is

$$(x - a)(x - b) \cdots (x - w)(x - x)(x - y)(x - z) = 0$$

Answer to PART III, Q3

What is the degree of $(x - a)(x - b)(x - c) \cdots (x - z)$?

COMMON ANS 26.

CORRECT ANS 0. Note that the poly is

$$(x - a)(x - b) \cdots (x - w)(x - x)(x - y)(x - z) = 0$$

VOTE Trick or Stupid?

Answer to PART III, Q3

What is the degree of $(x - a)(x - b)(x - c) \cdots (x - z)$?

COMMON ANS 26.

CORRECT ANS 0. Note that the poly is

$$(x - a)(x - b) \cdots (x - w)(x - x)(x - y)(x - z) = 0$$

VOTE Trick or Stupid?

One comment **Very interesting trick question, brings up all kinds of issues of type safety and lack of specificity in mathematics education.**

Answer to PART III, Q3

What is the degree of $(x - a)(x - b)(x - c) \cdots (x - z)$?

COMMON ANS 26.

CORRECT ANS 0. Note that the poly is

$$(x - a)(x - b) \cdots (x - w)(x - x)(x - y)(x - z) = 0$$

VOTE Trick or Stupid?

One comment **Very interesting trick question, brings up all kinds of issues of type safety and lack of specificity in mathematics education.**

Someone who does not like being tricked told me Degree is 26. Different types-of-variables. The 'x' in $(x - a)$ is of a different type then the second x in $(x - x)$.

Answer to PART III, Q3

What is the degree of $(x - a)(x - b)(x - c) \cdots (x - z)$?

COMMON ANS 26.

CORRECT ANS 0. Note that the poly is

$$(x - a)(x - b) \cdots (x - w)(x - x)(x - y)(x - z) = 0$$

VOTE Trick or Stupid?

One comment **Very interesting trick question, brings up all kinds of issues of type safety and lack of specificity in mathematics education.**

Someone who does not like being tricked told me Degree is 26. Different types-of-variables. The 'x' in $(x - a)$ is of a different type then the second x in $(x - x)$.

He would call it a stupid question.

Answer to PART III, Q3

What is the degree of $(x - a)(x - b)(x - c) \cdots (x - z)$?

COMMON ANS 26.

CORRECT ANS 0. Note that the poly is

$$(x - a)(x - b) \cdots (x - w)(x - x)(x - y)(x - z) = 0$$

VOTE Trick or Stupid?

One comment **Very interesting trick question, brings up all kinds of issues of type safety and lack of specificity in mathematics education.**

Someone who does not like being tricked told me Degree is 26. Different types-of-variables. The 'x' in $(x - a)$ is of a different type then the second x in $(x - x)$.

He would call it a stupid question.

I would call him a sore loser.

Trick Question or Stupid Question? PART IV

1. TRUE or FALSE:
If the powerset of A has 5 elts then A is infinite.
2. Find x such that the following is true. There are 2025 cans of paint. Either (a) There are $\geq x$ cans of the same color, or (b) There are $\geq x$ cans of different colors.
3. The year is 2021. There are 23 people in REU-CAAR. If everyone hugs everyone, how many hugs are there?

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

COMMON ANS F since the powerset of A cannot be five.

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

COMMON ANS F since the powerset of A cannot be five.

CORRECT ANS T vacuously.

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

COMMON ANS F since the powerset of A cannot be five.

CORRECT ANS T vacuously.

VOTE Trick or Stupid?

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

COMMON ANS F since the powerset of A cannot be five.

CORRECT ANS T vacuously.

VOTE Trick or Stupid?

COMMENTARY I did an experiment with this question.

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

COMMON ANS F since the powerset of A cannot be five.

CORRECT ANS T vacuously.

VOTE Trick or Stupid?

COMMENTARY I did an experiment with this question.

One year I put this on an exam as a

T-F-No-Explanation-Needed.

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

COMMON ANS F since the powerset of A cannot be five.

CORRECT ANS T vacuously.

VOTE Trick or Stupid?

COMMENTARY I did an experiment with this question.

One year I put this on an exam as a

T-F-No-Explanation-Needed.

5 years later I put this on an exam as

T-F, if T give short proof, if F give counterexample.

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

COMMON ANS F since the powerset of A cannot be five.

CORRECT ANS T vacuously.

VOTE Trick or Stupid?

COMMENTARY I did an experiment with this question.

One year I put this on an exam as a

T-F-No-Explanation-Needed.

5 years later I put this on an exam as

T-F, if T give short proof, if F give counterexample.

Hypothesis More would get second version right.

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

COMMON ANS F since the powerset of A cannot be five.

CORRECT ANS T vacuously.

VOTE Trick or Stupid?

COMMENTARY I did an experiment with this question.

One year I put this on an exam as a

T-F-No-Explanation-Needed.

5 years later I put this on an exam as

T-F, if T give short proof, if F give counterexample.

Hypothesis More would get second version right.

VOTE Did more people get it right if they had to explain? Y or N?

Answers to PART IV, Q1

T or F: If the powerset of the set A has 5 elts then A is ∞ .

COMMON ANS F since the powerset of A cannot be five.

CORRECT ANS T vacuously.

VOTE Trick or Stupid?

COMMENTARY I did an experiment with this question.

One year I put this on an exam as a

T-F-No-Explanation-Needed.

5 years later I put this on an exam as

T-F, if T give short proof, if F give counterexample.

Hypothesis More would get second version right.

VOTE Did more people get it right if they had to explain? Y or N?

WHAT HAPPENED People did TERRIBLE on this question both times. Even the honors section.

Answers to PART IV, Q2

Find x such that the following is true. There are 2025 cans of paint. Either (a) There are $\geq x$ cans of the same color, or (b) There are $\geq x$ cans of different colors.

Answers to PART IV, Q2

Find x such that the following is true. There are 2025 cans of paint. Either (a) There are $\geq x$ cans of the same color, or (b) There are $\geq x$ cans of different colors.

Common and Correct Answer $\sqrt{2025} = 45$.

Answers to PART IV, Q2

Find x such that the following is true. There are 2025 cans of paint. Either (a) There are $\geq x$ cans of the same color, or (b) There are $\geq x$ cans of different colors.

Common and Correct Answer $\sqrt{2025} = 45$.

Answer I got from an Obnoxious Student

Answers to PART IV, Q2

Find x such that the following is true. There are 2025 cans of paint. Either (a) There are $\geq x$ cans of the same color, or (b) There are $\geq x$ cans of different colors.

Common and Correct Answer $\sqrt{2025} = 45$.

Answer I got from an Obnoxious Student

$x = 2000$ since *ALL* the cans are all gray

Answers to PART IV, Q2

Find x such that the following is true. There are 2025 cans of paint. Either (a) There are $\geq x$ cans of the same color, or (b) There are $\geq x$ cans of different colors.

Common and Correct Answer $\sqrt{2025} = 45$.

Answer I got from an Obnoxious Student

$x = 2000$ since *ALL* the cans are all gray

Should that student get any points?

Answers to PART IV, Q2

Find x such that the following is true. There are 2025 cans of paint. Either (a) There are $\geq x$ cans of the same color, or (b) There are $\geq x$ cans of different colors.

Common and Correct Answer $\sqrt{2025} = 45$.

Answer I got from an Obnoxious Student

$x = 2000$ since *ALL* the cans are all gray

Should that student get any points?

Answer I got from another Obnoxious Student

Answers to PART IV, Q2

Find x such that the following is true. There are 2025 cans of paint. Either (a) There are $\geq x$ cans of the same color, or (b) There are $\geq x$ cans of different colors.

Common and Correct Answer $\sqrt{2025} = 45$.

Answer I got from an Obnoxious Student

$x = 2000$ since *ALL* the cans are all gray

Should that student get any points?

Answer I got from another Obnoxious Student

$x = 2000$ since *if you look at the paint with an electron microscope ALL of the different cans have different colors of paint.*

Answers to PART IV, Q2

Find x such that the following is true. There are 2025 cans of paint. Either (a) There are $\geq x$ cans of the same color, or (b) There are $\geq x$ cans of different colors.

Common and Correct Answer $\sqrt{2025} = 45$.

Answer I got from an Obnoxious Student

$x = 2000$ since *ALL* the cans are all gray

Should that student get any points?

Answer I got from another Obnoxious Student

$x = 2000$ since *if you look at the paint with an electron microscope ALL of the different cans have different colors of paint.*

Should that student get any points?

Answers to PART IV, Q3

The year is 2021. There are 23 people in REU-CAAR. If everyone hugs everyone, how many hugs are there?

Answers to PART IV, Q3

The year is 2021. There are 23 people in REU-CAAR. If everyone hugs everyone, how many hugs are there?

COMMON and INCORRECT ANSWER 23!. Some students think that in combinatorics the answer for a problem with n is always $n!$.

Answers to PART IV, Q3

The year is 2021. There are 23 people in REU-CAAR. If everyone hugs everyone, how many hugs are there?

COMMON and INCORRECT ANSWER $23!$. Some students think that in combinatorics the answer for a problem with n is always $n!$.

COMMON and CORRECT ANSWER $\binom{23}{2} = \frac{23 \times 22}{2} = 253$.

Answers to PART IV, Q3

The year is 2021. There are 23 people in REU-CAAR. If everyone hugs everyone, how many hugs are there?

COMMON and INCORRECT ANSWER 23!. Some students think that in combinatorics the answer for a problem with n is always $n!$.

COMMON and CORRECT ANSWER $\binom{23}{2} = \frac{23 \times 22}{2} = 253$.

CLEVER ANSWER 1. Its ONE big hug!

Answers to PART IV, Q3

The year is 2021. There are 23 people in REU-CAAR. If everyone hugs everyone, how many hugs are there?

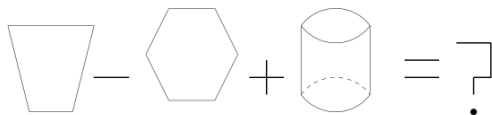
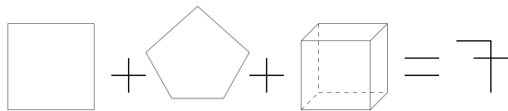
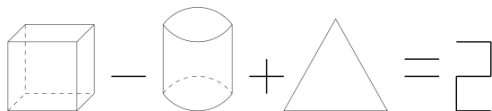
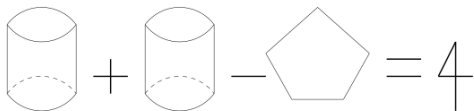
COMMON and INCORRECT ANSWER 23!. Some students think that in combinatorics the answer for a problem with n is always $n!$.

COMMON and CORRECT ANSWER $\binom{23}{2} = \frac{23 \times 22}{2} = 253$.

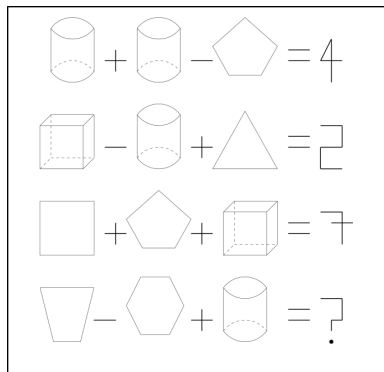
CLEVER ANSWER 1. Its ONE big hug!

ANSWER I HAD IN MIND REU-CAAR in Summer 2021 was VIRTUAL. So sadly, no hugs :-)

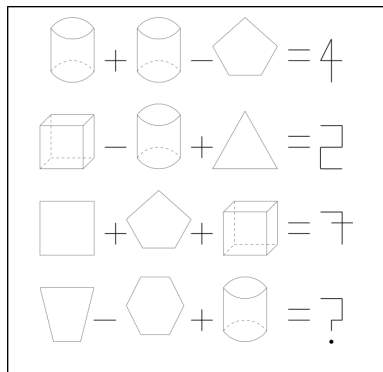
PART V: Fill in the ?



PART V: Fill in the ?

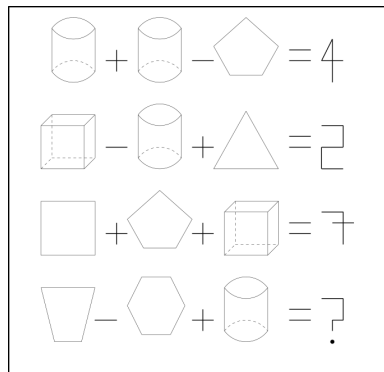


PART V: Fill in the ?



Sum the dimensions.

PART V: Fill in the ?



Sum the dimensions.

$$3 + 3 - 2 = 4$$

$$3 - 3 + 2 = 2$$

$$2 + 2 + 3 = 7$$

$$2 - 2 + 3 - 3$$

Trick Question or Stupid Question? PART VI

The following are two real conversations. For each one: (1) Is the examiner correct? (2) Where and when do you think this conversation took place?

Conversation 1:

Examiner: What is the definition of a circle?

Student: The set of points equidistant from a given point.

Examiner: Wrong! It is the set of *all* points equidistant from a given point.

Conversation 2:

Examiner: What is the definition of a circle?

Student: It is the set of all points equidistant from a given point.

Examiner: Wrong! You must say the distance is nonzero.

Answers to PART VI, Q2

The questions were in the USSR and used for the sole point of not letting Jews into the best schools.

Answers to PART VI, Q2

The questions were in the USSR and used for the sole point of not letting Jews into the best schools.

Comment Any system which blocks qualified people from doing what they are good at is stupid.

See next slide for more thoughts on this.

Racism is Idiotic

Racism is Idiotic

In 1947 when Jackie Robinson, the first major league black player (since the leagues were segregated in the 1880's) played for the Brooklyn Dodgers. He was very good. Some of **his own teammates** did not like that he was on the team.

Racism is Idiotic

In 1947 when Jackie Robinson, the first major league black player (since the leagues were segregated in the 1880's) played for the Brooklyn Dodgers. He was very good. Some of **his own teammates** did not like that he was on the team.

I wonder how they would fill in this sentence

On the one hand, if Jackie plays for us, we will win more games and have a better chance of getting into the World Series, which would increase my paycheck (Salary \$5000. World series paid *another* \$5000.) On the other hand FILL IT IN.

Racism is Idiotic

Racism is Idiotic

The Boston Red Sox didn't integrate until 1959.

Racism is Idiotic

The Boston Red Sox didn't integrate until 1959.

I wonder how the team owner would fill in this sentence

On the one hand, if I hire black players I expand my talent pool, get better players, and have a better chance of getting into the World Series, which would increase my profits (baseball didn't make as much money then as now). On the other hand FILL IT IN.

Racism is Idiotic

The Boston Red Sox didn't integrate until 1959.

I wonder how the team owner would fill in this sentence

On the one hand, if I hire black players I expand my talent pool, get better players, and have a better chance of getting into the World Series, which would increase my profits (baseball didn't make as much money then as now). On the other hand FILL IT IN.

Non-Caveat Was the owner was worried that white fans would not come see a team with a few black players on it? I checked it. It's not true. Even when being sued for racism, the owner never brought this up as an issue.

Racism is Idiotic

The Boston Red Sox didn't integrate until 1959.

I wonder how the team owner would fill in this sentence

On the one hand, if I hire black players I expand my talent pool, get better players, and have a better chance of getting into the World Series, which would increase my profits (baseball didn't make as much money then as now). On the other hand FILL IT IN.

Non-Caveat Was the owner was worried that white fans would not come see a team with a few black players on it? I checked it. It's not true. Even when being sued for racism, the owner never brought this up as an issue.

He was an honest racist, not hiding behind some other excuse.

Racism is Idiotic

The Boston Red Sox didn't integrate until 1959.

I wonder how the team owner would fill in this sentence

On the one hand, if I hire black players I expand my talent pool, get better players, and have a better chance of getting into the World Series, which would increase my profits (baseball didn't make as much money then as now). On the other hand FILL IT IN.

Non-Caveat Was the owner was worried that white fans would not come see a team with a few black players on it? I checked it. It's not true. Even when being sued for racism, the owner never brought this up as an issue.

He was an honest racist, not hiding behind some other excuse. Keep that in mind.

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed.

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays.

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.
Did the people in the military who said this really believe it, or was it a cover for their own homophobia?

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.
Did the people in the military who said this really believe it, or was it a cover for their own homophobia?
2. **Don't ask Don't Tell:** We can only have gay in the military if they are NOT out, so they ARE blackmail-able.

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.
Did the people in the military who said this really believe it, or was it a cover for their own homophobia?
2. **Don't ask Don't Tell:** We can only have gay in the military if they are NOT out, so they ARE blackmail-able.
Okay, that makes sense.

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.
Did the people in the military who said this really believe it, or was it a cover for their own homophobia?
2. **Don't ask Don't Tell:** We can only have gay in the military if they are NOT out, so they ARE blackmail-able.
Okay, that makes sense. No it doesn't!

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.
Did the people in the military who said this really believe it, or was it a cover for their own homophobia?
2. **Don't ask Don't Tell:** We can only have gay in the military if they are NOT out, so they ARE blackmail-able.
Okay, that makes sense. No it doesn't! Shows the prior reason given **was** just an excuse.

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.
Did the people in the military who said this really believe it, or was it a cover for their own homophobia?
2. **Don't ask Don't Tell:** We can only have gay in the military if they are NOT out, so they ARE blackmail-able.
Okay, that makes sense. No it doesn't! Shows the prior reason given **was** just an excuse.
3. The reason given now was unit-cohesion.

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.
Did the people in the military who said this really believe it, or was it a cover for their own homophobia?
2. **Don't ask Don't Tell:** We can only have gay in the military if they are NOT out, so they ARE blackmail-able.
Okay, that makes sense. No it doesn't! Shows the prior reason given **was** just an excuse.
3. The reason given now was unit-cohesion. Did they really believe it, or was it a cover for their own homophobia?

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.
Did the people in the military who said this really believe it, or was it a cover for their own homophobia?
2. **Don't ask Don't Tell:** We can only have gay in the military if they are NOT out, so they ARE blackmail-able.
Okay, that makes sense. No it doesn't! Shows the prior reason given **was** just an excuse.
3. The reason given now was unit-cohesion. Did they really believe it, or was it a cover for their own homophobia?
4. The Unit-Cohesion argument is the **exact same argument** used for not integrating the army during WW II.

Homophobia is Not Just Immoral, It's Stupid

1. **Until 1980's** We can't have gays in the military because they can be blackmailed. Then only recruit out gays. This was never considered.
Did the people in the military who said this really believe it, or was it a cover for their own homophobia?
2. **Don't ask Don't Tell:** We can only have gay in the military if they are NOT out, so they ARE blackmail-able.
Okay, that makes sense. No it doesn't! Shows the prior reason given **was** just an excuse.
3. The reason given now was unit-cohesion. Did they really believe it, or was it a cover for their own homophobia?
4. The Unit-Cohesion argument is the **exact same argument** used for not integrating the army during WW II.

Continued on the next slides.

Same Topic

This all came to a head when the Military desperately needed translators and kept firing the gay ones.

Same Topic

This all came to a head when the Military desperately needed translators and kept firing the gay ones.

How would the military fill in the following sentence

Same Topic

This all came to a head when the Military desperately needed translators and kept firing the gay ones.

How would the military fill in the following sentence

On the one hand, if we stop firing our gay translators we would know what are enemies are doing. On the other hand FILL IT IN.

More Generally

Any society that **bans** some group

More Generally

Any society that **bans** some group

(e.g., blacks, gays, women, non-citizens, Jews, Catholics, Atheists, Muslims, Uyghurs, Wisians, you can name more)

More Generally

Any society that **bans** some group

(e.g., blacks, gays, women, non-citizens, Jews, Catholics, Atheists, Muslims, Uyghurs, Wisians, you can name more)

from doing X (goto college, other things) solely based on what they are, will not do as well as those that are more accepting.

More Generally

Any society that **bans** some group

(e.g., blacks, gays, women, non-citizens, Jews, Catholics, Atheists, Muslims, Uyghurs, Wisians, you can name more)

from doing X (goto college, other things) solely based on what they are, will not do as well as those that are more accepting.

How would they fill in the following sentence?

More Generally

Any society that **bans** some group

(e.g., blacks, gays, women, non-citizens, Jews, Catholics, Atheists, Muslims, Uyghurs, Wisians, you can name more)

from doing X (goto college, other things) solely based on what they are, will not do as well as those that are more accepting.

How would they fill in the following sentence?

On the one hand if we let people participate in our society we will get more talented people channeled into activities that will benefit our society. On the other hand, if we ban Y from doing X then FILL IT IN.

To End on a Brighter Note

Back to our original theme.

To End on a Brighter Note

Back to our original theme.

When given a math problem it can be

- ▶ Trick
- ▶ Stupid
- ▶ Enlightening

It can also be some combination of these.

To End on a Brighter Note

Back to our original theme.

When given a math problem it can be

- ▶ Trick
- ▶ Stupid
- ▶ Enlightening

It can also be some combination of these.

How many combinations of these are there?

To End on a Brighter Note

Back to our original theme.

When given a math problem it can be

- ▶ Trick
- ▶ Stupid
- ▶ Enlightening

It can also be some combination of these.

How many combinations of these are there?

NOT five.