Math Jeopardy

Calculus	Definitions	History	Discrete	Puzzles
100	100	100	100	100
200	200	200	200	200
300	300	300	300	300
400	400	400	400	400
500	500	500	500	500

Calculus 100

Compute: $\frac{d^2}{dx^2}\left(x^2\cos(x)\right)$

Calculus 200

What is Rolle's Thoerem?

Calculus 300

Compute $\int(\int(\int(x+6)dx)dx)dx$

Calculus 400

Compute: $\frac{d}{dx}(2^x)$

Calculus 500

Compute: $\int \frac{1}{x^2\sqrt{x^2-4}}dx$

Definitions 100

Give an equation containing two variables that is not a function:

Definitions 200

What does it mean for a function to be even?

What is a dihedral group?

Definitions 400

In the equation $8 - 3 = 5$ what is the minuend?

Definitions 500

State the Fundamental Theorem of Calculus:

History 100

Who invented Calculus?

History 200

What base was the Mayan number system?

History 300

$\sqrt{2}$ is known as this mathematician's constant:

History 400

This famous mathematician introduced the notion that some infinities are bigger than others.

History 500

Who was the first person to use $f(x)$ notation?

Discrete 100

What is the definition of odd?

Discrete 200

State the Well-Ordering Principle

A drawer contains 6 pairs of black socks, 5 pairs of white socks, 5 pairs of red socks, and 4 pairs of green socks. How many single socks do we have to take out to make sure that we take out two socks with different colors?

Discrete 400

What does it mean for a function $f : \mathbb{R} \to \mathbb{R}$ to be a surjection?

Discrete 500

Let $M = \{m : m$ is a math major$\}$, $P = \{p : p$ is in this room$\}$, $F = \{f : f$ is having fun$\}$. Convert the following formal notation to words without the use of variables:
$\forall x \in M$,if $x \in P$ then $x \in F$

Puzzles 100

What is $\pi + e$?

Puzzles 200

Using only addition, how can you make eight 8's into 1000?

What is the difference between a new penny and an old quarter?

Puzzles 400

There is a chain nailed to a wall. The chain is 10 feet long and the center of the chain dips down 5 feet from where each side of the chain is nailed to the wall. How far are the 2 ends of the chain from each other?

Puzzles 500

You have three bag. Bag A contains two black marbles, bag B contains two white marbles, and bag C contains one black and one white marble. You choose a bag and pull out a white marble. What is the probability that the second marble in the bag is white?