Sriram Pendyala

Science Bowl

Math Questions: Set #2: 10 Questions Short Answer

1. Math: Short Answer: Solve the differential equation .

ANSWER:

1. Math: Short Answer: Write the hyperbolic cosine of x in exponential form.

ANSWER:

1. Math: Short Answer: Find the solution to the differential equation .

ANSWER:

1. Math: Short Answer: What is a thin, flat, plate of material of constant density that one can find the center of mass of using integration?

ANSWER: planar lamina

1. Math: Short Answer: Find the following integral:

ANSWER:

1. Math: Short Answer: Find the derivative of the inverse hyperbolic tangent of u with respect to x, assuming u is a function of x.

ANSWER:

1. Math: Short Answer: Geometrically, the general solution of a first-order differential equation represents a family of curves known as what?

ANSWER: Solution curves

1. Math: Short Answer: The limit of a Riemann sum as the norm of the summation shrinks to zero is termed what?

ANSWER: Definite Integral

1. Math: Short Answer: What is the name of the hyperbolic cosine curve that is formed when a cable is suspended between two towers?

ANSWER: catenary

1. Math: Short Answer: Find f’(x) and f’’(x) if

ANSWER: