

Data Head

Find $\frac{dy}{dx}$ for $5x^2 - 2xy + 7y^2 = 0$

- a) $\frac{5x + 7y}{x}$
- b) $\frac{y - 5x}{7y}$
- c) $10x - 2y + 14y$
- d) $\frac{y - 5x}{7y - x}$

Data Head

Find the domain of the function
 $f(x) = \sqrt{2x + 3}$

- a) $[0, \infty)$
- b) $(0, \infty)$
- c) $\left[-\frac{3}{2}, \infty\right)$
- d) $\left(-\frac{3}{2}, \infty\right)$

Data Head

Find $\frac{f(x + \Delta x) - f(x)}{\Delta x}$ if $f(x) = 8x^2 + 1$

- a) $8(\Delta x)^2 + 1$
- b) $8\Delta x + \frac{1}{\Delta x}$
- c) $16x + 8\Delta$
- d) $16x(\Delta x) + 8(\Delta x)^2$

Data Head

Find the average value of $f(x) = 3x^2 - 2$
on the interval $[0, 2]$.

- a) 1
- b) 5
- c) 6
- d) 2

Data Head

At which value(s) of x is
 $f(x) = \frac{x^2 - 2x - 3}{x - 2}$ discontinuous?

- a) 2
- b) -1, 2, 3
- c) -1, $\frac{3}{2}$, 2, 3
- d) 1

Data Head

$f(x)$ decreases without bound as x
approaches what value from the right?

$$f(x) = \frac{4}{(x - 3)(5 - x)}$$

- a) 5
- b) -3
- c) -5
- d) 3

Data Head

Differentiate: $f(x) = x^2 + 2 \tan x$

- a) $2x + 2 \tan x$
- b) $2x + \sec^2 x$
- c) $2 + \sec^2 x$
- d) $2x + 2 \sec^2 x$

Data Head

Find $f'(x)$ for $f(x) = (2x^2 + 5)^7$

- a) $7(4x^6)$
- b) $(4x)^7$
- c) $28x(2x^2 + 5)^6$
- d) $7(2x^2 + 5)^6$

DATAHEAD



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Sensograph

Sketch the graph of the following function,
without looking at the paper!

$$y = \cos x$$

Sensograph

Sketch the graph of the following function,
without looking at the paper!

$$y = \sqrt[3]{x}$$

Sensograph

Sketch the graph of the following function,
without looking at the paper!

$$y = \lceil x \rceil$$

Sensograph

Sketch the graph of the following function,
without looking at the paper!

$$y = -\sqrt{x}$$

Sensograph

Sketch the graph of the following function,
without looking at the paper!

$$y = \frac{1}{x}$$

Sensograph

Sketch the graph of the following function,
without looking at the paper!

$$y = \ln x$$

Sensograph

Sketch the graph of the following function,
without looking at the paper!

$$y = x^3$$

Sensograph

Sketch the graph of the following function,
without looking at the paper!

$$y = 2^x$$

SENSOGRAPH



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Sculpturific

Using the modeling clay, sculpt a model of the following **without using gestures, drawing or without talking!**

Graphing Calculator

Sculpturific

Using the modeling clay, sculpt a model of the following **without using gestures, drawing or without talking!**

Volume of a Solid Formed by Perpendicular Cross Sections

Sculpturific

Using the modeling clay, sculpt a model of the following **without using gestures, drawing or without talking!**

Area Under a Curve

Sculpturific

Using the modeling clay, sculpt a model of the following **without using gestures, drawing or without talking!**

Cube Root

Sculpturific

Using the modeling clay, sculpt a model of the following **without using gestures, drawing or without talking!**

Cosine Curve

Sculpturific

Using the modeling clay, sculpt a model of the following **without using gestures, drawing or without talking!**

Circle Graph

Sculpturific

Using the modeling clay, sculpt a model of the following **without using gestures, drawing or without talking!**

Absolute Value Graph

Sculpturific

Using the modeling clay, sculpt a model of the following **without using gestures, drawing or without talking!**

Scatterplot

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Performing Arts

Act out the mathematical term or concept below using only gestures. **No talking allowed!**

Chain Rule

Performing Arts

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Tangent Line to a Curve

Performing Arts

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Slope Field

Performing Arts

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Volume of a Solid Formed by Rotating a Graph Around the x-axis

Performing Arts

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Trapezoid Rule

Performing Arts

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Exponential Decay

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Horizontal Asymptote

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U Substitution

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Spelly Cat

Spell the following term *backwards*
without writing!

Extrema

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without writing!

Function

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Spell the following term *on the first try*
without writing!

Asymptote

Spelly Cat

Spell the following term *on the first try*
without writing!

Orthogonal

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Integration

Spelly Cat

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Derivative

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Reciprocal

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Spell the following term *on the first try*
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Trigonometry

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