

Day One Activity Circuit-Style

Self-Checking



ALGEBRA 2 - DAY ONE!

Name: _____



Circuit Style: Start your brain training in Cell #1, search for your answer. Label that block as Cell #2 and continue to work until you complete the entire exercise for your Algebra 2 Brain Training.

Answer: $y = \frac{1}{2}x - 7$ Find the slope of the line containing the points (5, -4) and (-3, -6).	#1 Answer: $x^2 + xy - 6y^2$ Simplify, no negative exponents.
Answer: $2x^3 - 5x^2 - 7x - 2$ Factor Completely: $2x^3 - 2x^2 - 24x$	Answer: (4, 5) Multiply and simplify:
Answer: $(2x - 3)(x + 5)$ Write the equation of a line with a slope of 3 and passing through the point (-5, -7).	Answer: $\frac{1}{4}$ Solve for y: $2x + 3y = 12$
Answer: $-9 \leq x \leq 3$ Solve by the addition method.	Answer: (-7, 3) Write an equation of the point (6, -4) and perpendicular to $y = -2x - 3$.

PRECALCULUS - DAY ONE!

Name: _____



Circuit Style: Start your brain training in Cell #1, search for your answer. Label that block as Cell #2 and continue to work until you complete the entire exercise for your Pre-Calculus Brain Training.

Answer: $x^3 - 2x^2 - 5x + 6$ Simplify: $\sqrt{45} \cdot \sqrt{30}$	#1 Answer: (-2, -6) (3, 14) Write the equation of the line through the points (3, -7) and (5, 1).
Answer: $\frac{x^2 + 2xy - y^2}{x^2y^2}$ Factor Completely: $3x^3 - 2x^2 - 8x$	Answer: $2x^3 + x^2 - x + 3$ State the domain for: $y = \sqrt{x-1}$
Answer: $y \geq -2 x + 1 + 3$ Let $f(x) = x^2 - 4x$ and $g(x) = 2x - 3$. Find $f(g(5))$.	Answer: $\frac{16x^9}{y}$ Add: $\frac{x-y}{x^2y} + \frac{x+y}{xy^2}$
Answer: 26 Solve for y:	Answer: $x = 3 \pm \sqrt{5}$ Solve the system: $\begin{cases} 3x - y = 1 \\ 3x - 4y = 10 \end{cases}$

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CALCULUS - DAY ONE!

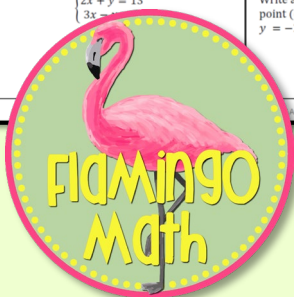
Name: _____



Circuit Style: Start your brain training in Cell #1, search for your answer. Label that block as Cell #2 and continue to work until you complete the entire exercise for your Calculus Brain Training.

Answer: $\frac{\sqrt{3}}{2}$ Simplify: $\frac{3x^2 + 19x + 20}{6x^2 + 31x + 5}$	#1 Answer: $y = \frac{2e^x}{e^3 - 1}$ If $f(x) = x^2 - 5$, evaluate: $\frac{f(x+h) - f(x)}{h}$
Answer: $(-\infty, 1]$ Simplify: $x(2x + 3(x - (3x + 1)))$	Answer: $\{\pm 1, \pm\sqrt{5}\}$ Evaluate: $3 \log_2 4 + \frac{1}{2} \log_2 6 - \frac{1}{2} \log_2 24$
Answer: [-2, 10) Find the zeros, given: $f(x) = \frac{2x^2 - 2x - 24}{x^2 + 3x - 10}$	Answer: $\frac{3x + 4}{6x + 1}$ Find the point(s) of intersection: $\begin{cases} y = x - 1 \\ x = 3 - y^2 \end{cases}$
Answer: $\frac{x}{2}$ Solve for x:	Answer: -5 Solve for x: $\ln(x - 2) - 3 \ln 2 = 2$

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ALGEBRA 2 - DAY ONE!

Name: _____



Circuit Style: Start your brain training in Cell #1, search for your answer. Label that block as Cell #2 and continue to work until you complete the entire exercise for your Algebra 2 Brain Training.

Answer: $y = \frac{1}{2}x - 7$

#1

Answer: $x^2 + xy - 6y^2$

Find the slope of the line passing through the points (5, -4) and (-6, 1).

Simplify, no negative exponents.

Answer: $2x^3 - 5x^2 - 7x - 2$

Answer: (4, 5)

Factor Completely: $2x^3 - 2x^2 - 24x$

Multiply and simplify:

$\sqrt{10x^2y^3} \cdot \sqrt{2x^2y}$

Answer: $(2x - 3)(x + 5)$

Answer: $\frac{1}{4}$

Write the equation of a line with a slope of 3 and passing through the point (-5, -7).

Solve for y: $3x + 3y = 12$

Answer: $-9 \leq x \leq 3$

Answer: (-7, 3)

Solve by the addition method.

$\begin{cases} 2x + y = 13 \\ 3x + 2y = 13 \end{cases}$

Write an equation of the line containing the

Answer: $[-3, \infty)$

Write the cubic polynomial with real zeros at $x = -2, 3, 1$.

Answer: $\frac{9\sqrt{3}}{2}$

Simplify: $\frac{(4x^2y^3)^2}{(xy)^9}$

Answer: $x(3x + 4)(x - 2)$

Simplify: Find $f(x - 2)$ given $f(x) = x^2 - 3x + 4$

Answer: $\frac{16x^9}{y}$

Solve: $x^2 - 21x + 108 = 0$

Answer: $15\sqrt{6}$

Multiply: $(5 + i)(5 - i)$

Answer: (2, -1)

Multiply: $(2x + 3)(x^2 - x + 1)$

CALCULUS - DAY ONE!

Name: _____



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Answer: $\frac{\sqrt{2}}{2}$

#1

Answer: $y = \frac{-2e^x}{e^x - 1}$

Simplify: $\frac{3x^2 + 19x + 20}{6x^2 + 31x + 5}$

If $f(x) = x^2 - 5$, evaluate: $f(x+h)$

Answer: $(-\infty, 1]$

Answer: $\{\pm 1, \pm\sqrt{5}\}$

Simplify: $x(2x + 3(x - (3x + 1)))$

Evaluate: $3 \log_2 4 + \frac{1}{2} \log_2 6 - \frac{1}{2} \log_2 24$

Answer: $[-2, 10)$

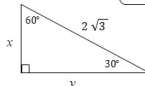
Find the zeros, given: $f(x) = \frac{2x^2 - 2x - 24}{x^2 + 3x - 10}$

Answer: $\frac{3x + 4}{6x + 1}$

Find the point(s) of intersection:
 $\begin{cases} y = x - 1 \\ x = 3 - y^2 \end{cases}$

Answer: $\frac{x}{2}$

Solve for x:



Answer: -5

Solve for x: $\ln(x - 2) - 3 \ln 2 = 2$

Answer: $8x^2 - x + 1$

Multiply: $(2x + 1)(x^2 - 3x - 2)$

Answer: $-\frac{5x^3}{y^3}$

Factor completely: $2x^2 + 7x - 15$

Answer: $y = -\frac{2}{3}x + 4$

Simplify: $3(2x - y) - (5x + 4y - 2)$

Answer: $2x - 3y \leq 12$

Solve: $4|x + 3| \leq 24$

Answer: $2x^2y^2\sqrt{5}$

Solve by factoring: $x^2 + 4x - 21 = 0$

Answer: $y = 3x + 8$

Subtract: $(6x^2 - 4x + 3) - (2 - 3x - 2x^2)$

PRECALCULUS - DAY ONE!

Name: _____



Circuit Style: Start your brain training in Cell #1, search for your answer. Label that block as Cell #2 and continue to work until you complete the entire exercise for your Pre-Calculus Brain Training.

Answer: $x^3 - 2x^2 - 5x + 6$

#1

Answer: (-2, -6) (3, 14)

Simplify: $\sqrt{45} \cdot \sqrt{30}$

Write the equation of the line that passes through the points (3, -7) and (-6, -13)

Answer: $\frac{x^2 + 2xy - y^2}{x^2y^2}$

Factor completely: $3x^3 - 2x^2 - 8x$

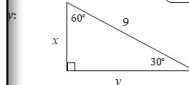
Answer: $2x^3 + x^2 - x + 3$

State the domain for: $y = \sqrt{x + 3} - 2$

Answer: $\frac{16x^9}{y}$

Answer: $\frac{x - y}{x^2y} + \frac{x + y}{xy^2}$

Answer: 26



Answer: $x = 3 \pm \sqrt{5}$

Solve the system: $\begin{cases} 3x - y = 7 \\ 3x - 4y = 10 \end{cases}$

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Answer: $\frac{\sqrt{2}}{2}$

#1

Answer: $y = \frac{-2e^x}{e^x - 1}$

Simplify: $\frac{3x^2 + 19x + 20}{6x^2 + 31x + 5}$

If $f(x) = x^2 - 5$, evaluate: $f(x+h)$

Answer: $(-\infty, 1]$

Answer: $\{\pm 1, \pm\sqrt{5}\}$

Simplify: $x(2x + 3(x - (3x + 1)))$

Evaluate: $3 \log_2 4 + \frac{1}{2} \log_2 6 - \frac{1}{2} \log_2 24$

Answer: $[-2, 10)$

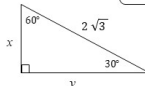
Find the zeros, given: $f(x) = \frac{2x^2 - 2x - 24}{x^2 + 3x - 10}$

Answer: $\frac{3x + 4}{6x + 1}$

Find the point(s) of intersection:
 $\begin{cases} y = x - 1 \\ x = 3 - y^2 \end{cases}$

Answer: $\frac{x}{2}$

Solve for x:



Answer: -5

Solve for x: $\ln(x - 2) - 3 \ln 2 = 2$

Answer: 5

Let $g(x) = x^2 + bx + c$. If $g(2) = 0$ and $g(-3) = 0$, find $b + c$.

Answer: 6

State the domain: $g(x) = -2 + \sqrt{1 - x}$

Answer: $\frac{1}{\sqrt{x+2}}$

Answer: $\cos(\sin^{-1}(\frac{1}{2}))$

Answer: $2x + h$

Solve the inequality: $-2 < -\frac{x}{2} + 3 \leq 4$

Answer: $-4x^2 - 3x$

Simplify: $\frac{x + \frac{1}{2}}{2 + \frac{1}{x}}$

Answer: $\sqrt{3}$

Find the inverse: $f(x) = \ln(\frac{x}{x-2})$

Answer: $\{-3, 4\}$

Solve: $x^4 - 6x^2 + 12 = 7$

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