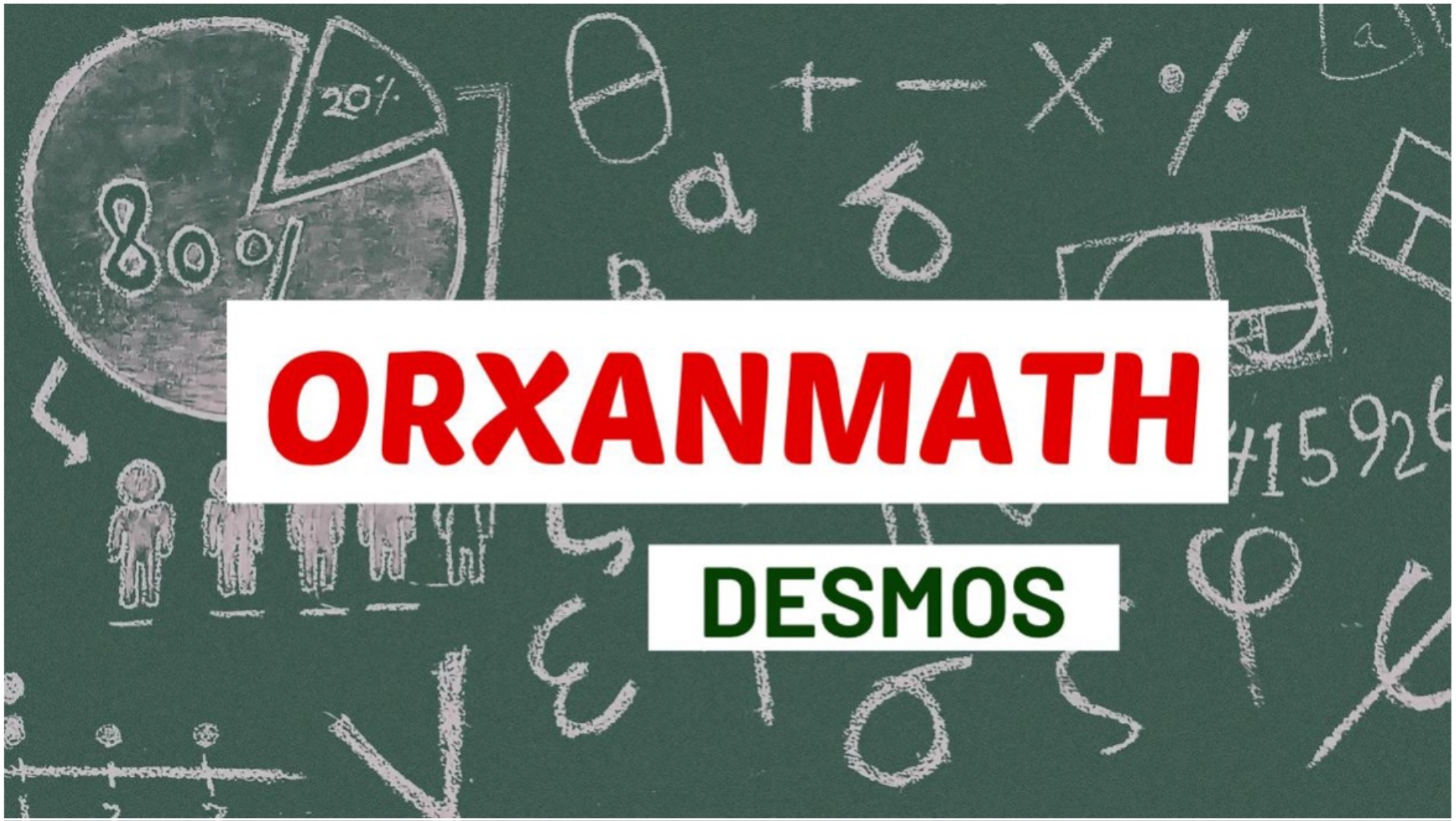
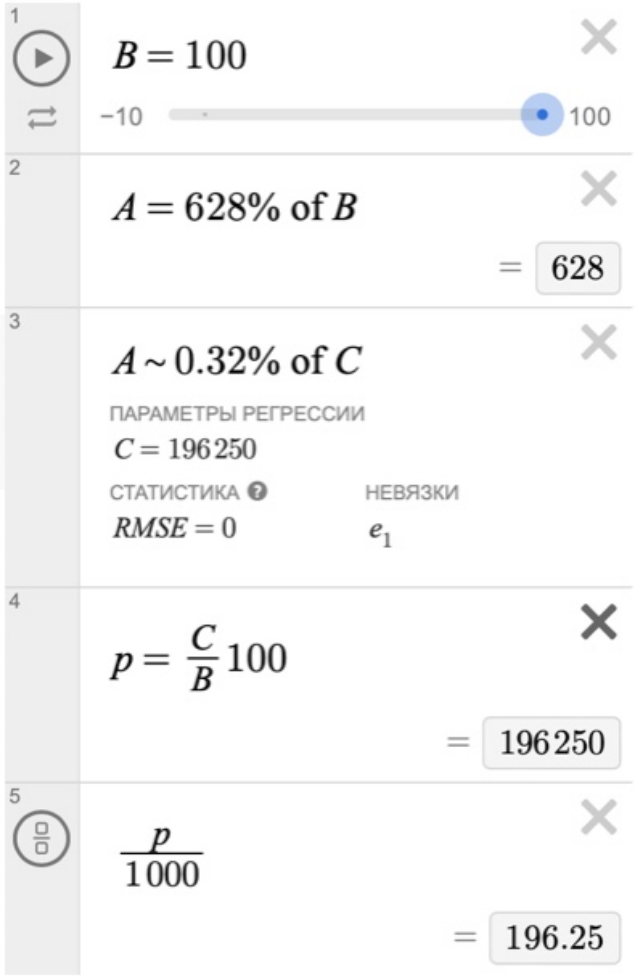

ORXANMATH
DESMOS

Advanced Digital Sat Math Course

Desmos Method For Each Question

A, B, C are positive constants where $A = 628\%$ of B and $A = 0.32\%$ of C. If $p\%$ of B is C, what is $\frac{p}{1000}$?



(+994) 50 999 17 27

Orxanmath-800.io

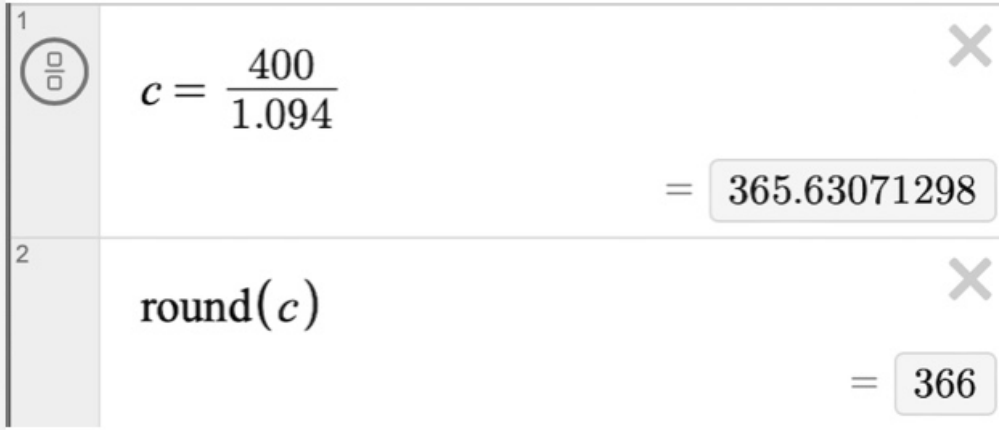
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

A running track has a circumference of 400 yards. What is its circumference in meters, rounded to the nearest whole number?
(1 meter = 1.094 yards)



(+994) 50 999 17 27
Orxanmath-800.io
satmath_orkhan

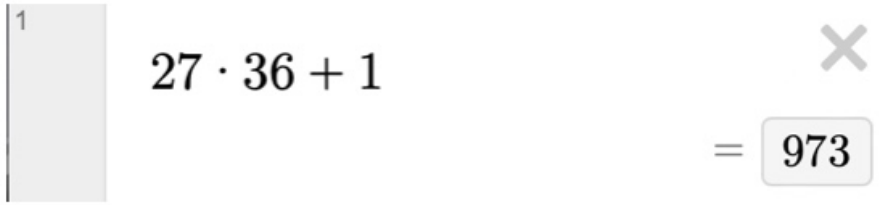
ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

$27m^{12} + bm^6 + 36$

In the given equation, b is a positive integer. If $pm^6 + q$ is a factor of given expression, where p and q are positive integers, what is the maximum value of b?

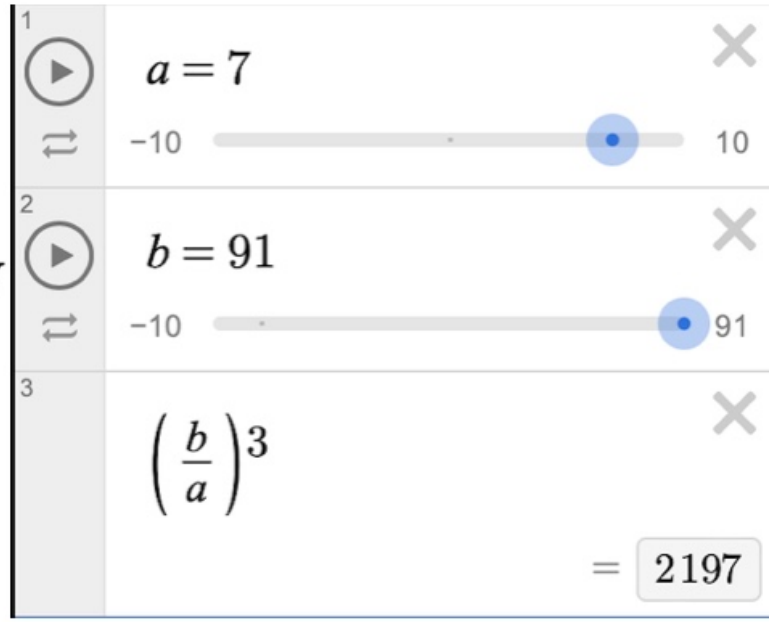


(+994) 50 999 17 27
Orxanmath-800.io
satmath_orkhan

Advanced Digital Sat Math Course

Desmos Method For Each Question

Sphere A has a radius of $7x$ and sphere B has a radius of $91x$. The volume of sphere B is how many times the volume of sphere A ?



(+994) 50 999 17 27

Orxanmath-800.io

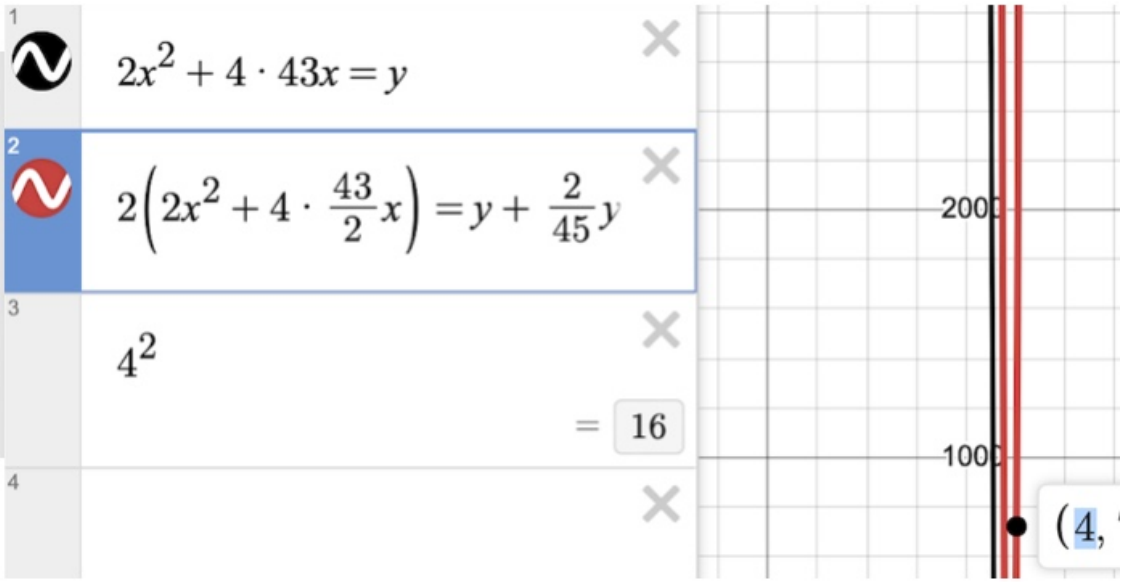
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

A prism (height 43 cm) is split into two shorter prisms. The total surface area increases by $\frac{2}{45}A$. What is the base area?



(+994) 50 999 17 27

Orxanmath-800.io

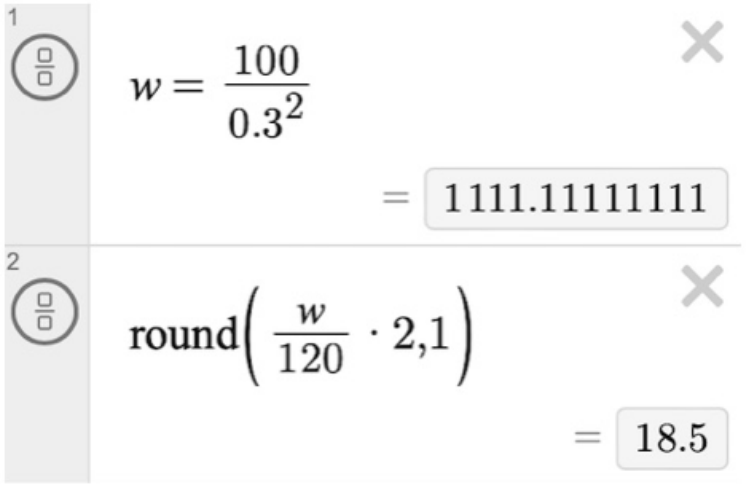
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

A wall measures 100 meters by 5 meters. If 1 liter of paint covers approximately 120 square feet, how much paint (in liters) is needed to paint the wall twice?
(Round to the nearest tenth; 1 foot = 0.3 meters)



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

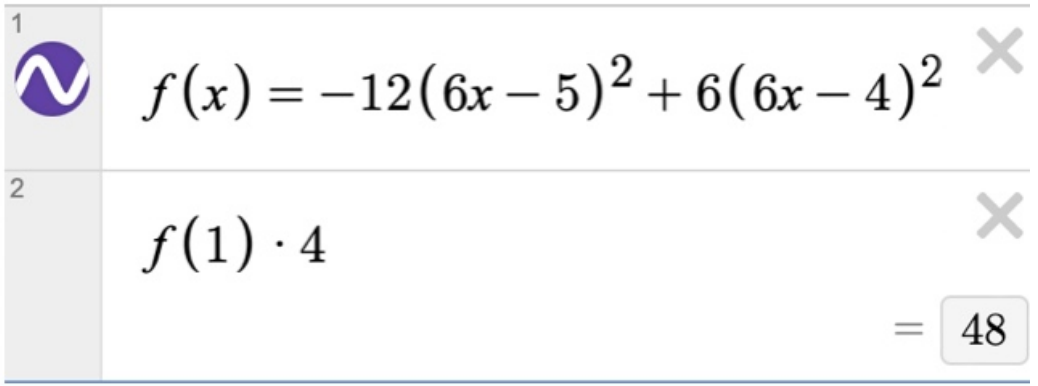
ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

If $\left(\frac{a}{4}\right)x^2 + \left(\frac{b}{4}\right)x + \frac{c}{4} = -12(6x-5)^2 + 6(6x-4)^2$, find the sum of $a+b+c$.



(+994) 50 999 17 27

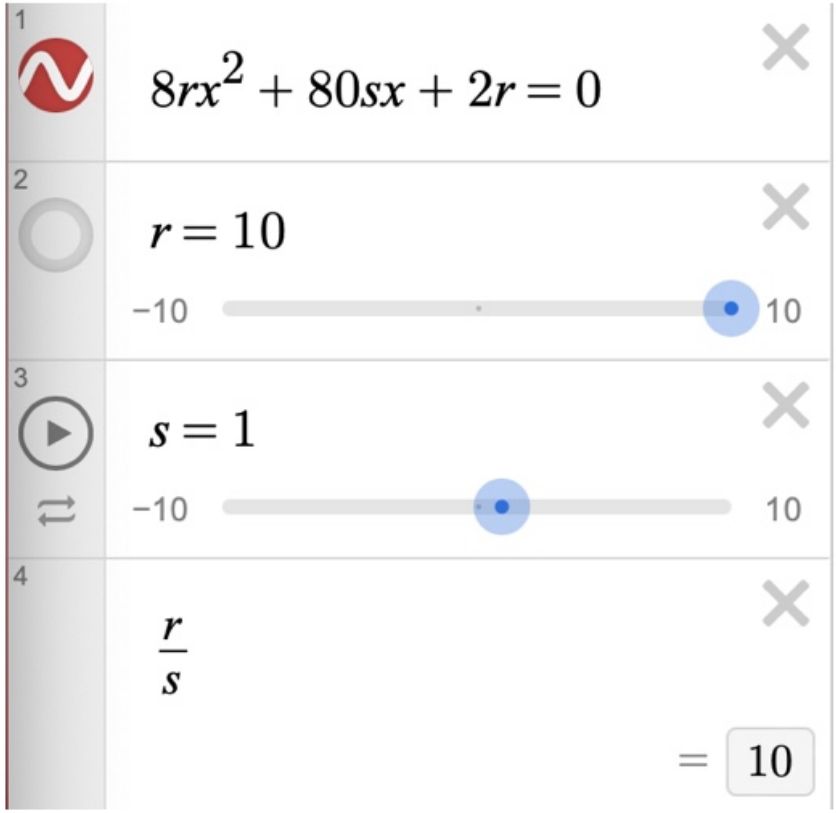
Orxanmath-800.io

satmath_orkhan

Advanced Digital Sat Math Course

Desmos Method For Each Question

1. For the equation $8rx^2 + 80sx + 2r = 0$, where r and s are constants, what is the largest ratio of $\frac{r}{s}$ for there to be at least one real solution?



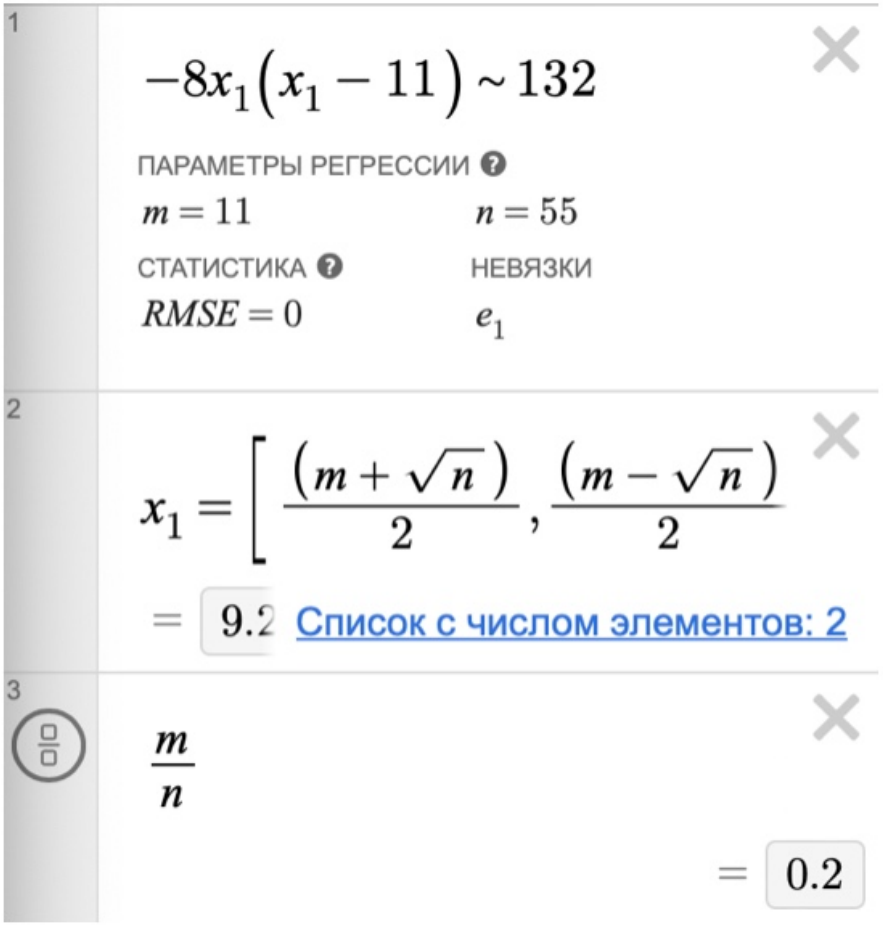
(+994) 50 999 17 27
Orxanmath-800.io
satmath_orkhan

Advanced Digital Sat Math Course

Desmos Method For Each Question

$-8x\,(x-11)=132$

One of solution to the given expression is $x=\frac{m+\sqrt{n}}{2}$, where m and n are positive constants. What is the value of $\frac{m}{n}$?



(+994) 50 999 17 27

Orxanmath-800.io

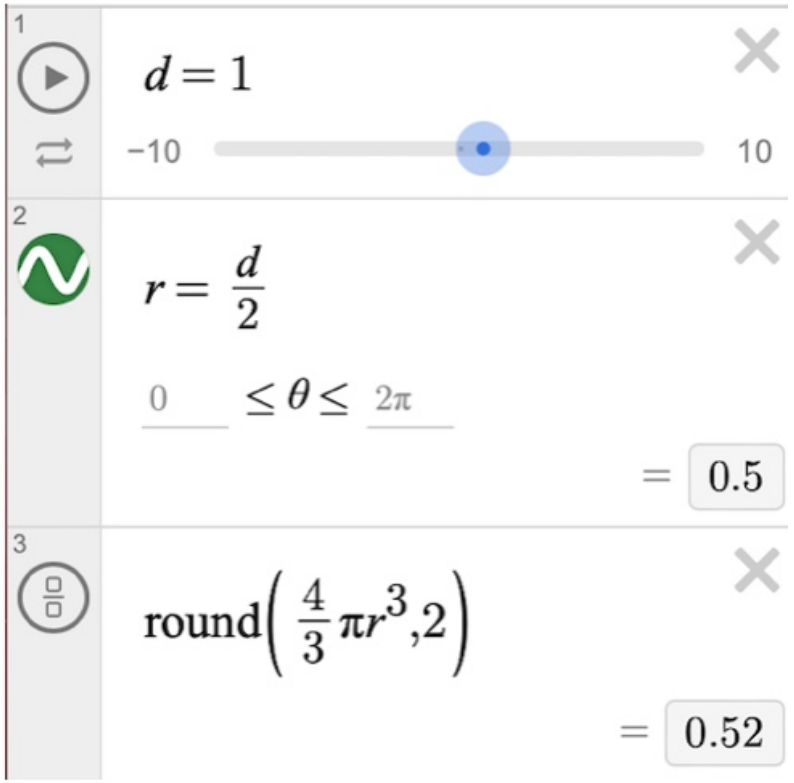
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

In a certain box, there are some spherical equal-sized marbles. If the internal dimeter of each marble is 1 cm, what is the volume of each marble, in cm^3? (Round your answer to the nearest hundreds)



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH

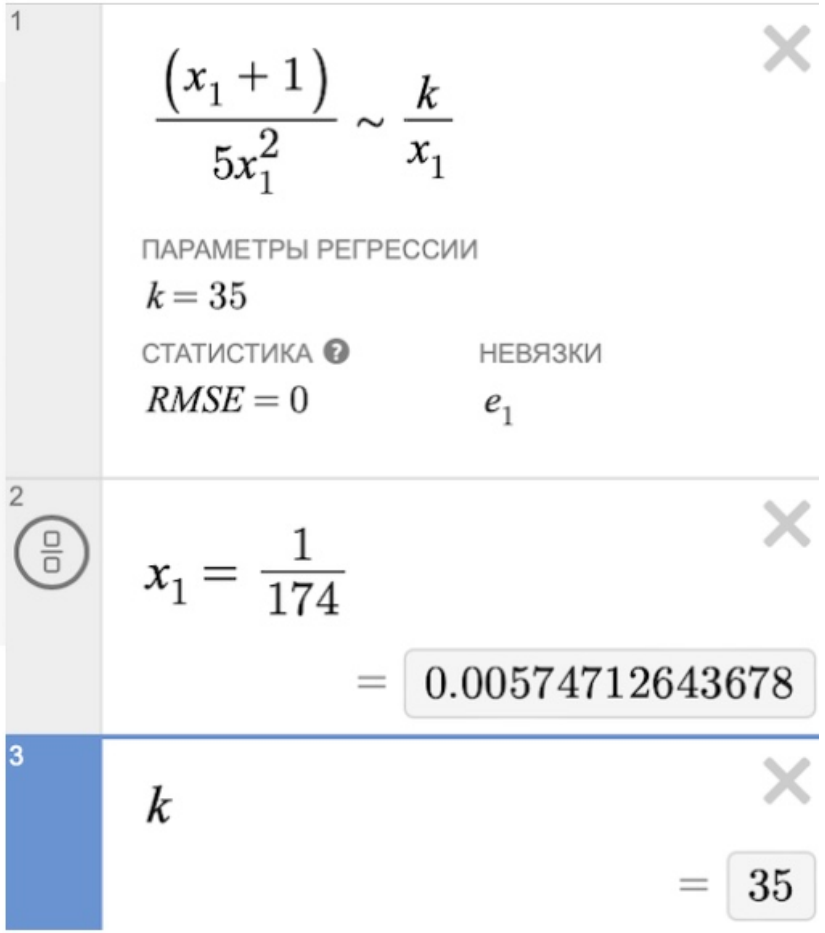
Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

$$\frac{x+1}{5x^2} = \frac{k}{x}$$

In the given equation, k is a constant. The solution to the given equation is $\frac{1}{174}$. What is the value of k?



(+994) 50 999 17 27

Orxanmath-800.io

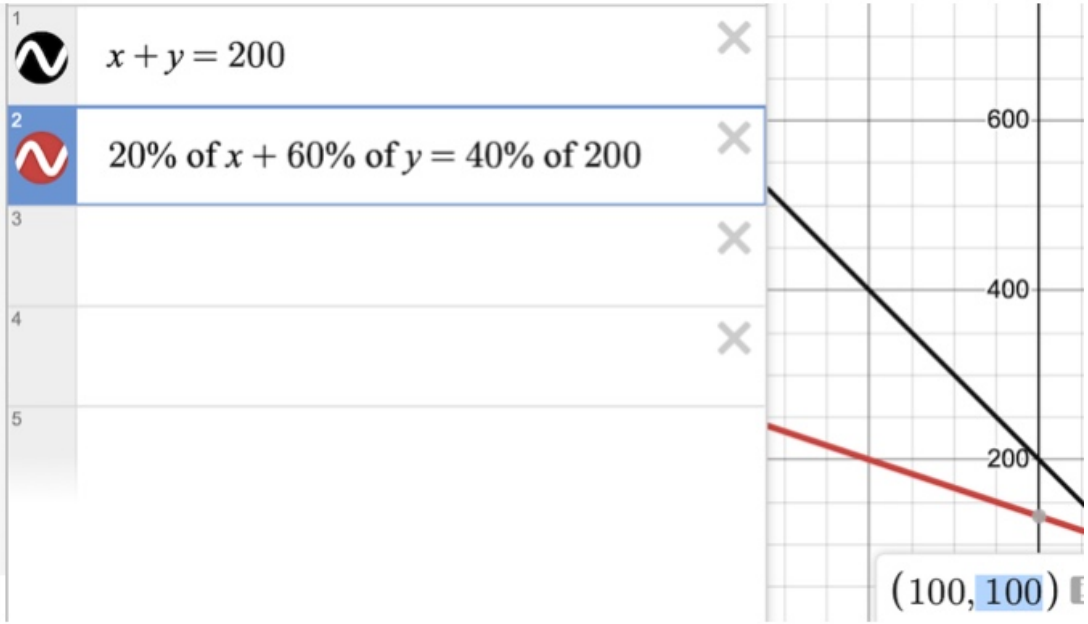
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

A 200 gram metal alloy is 40% copper. It contains a metal alloy that is 20% copper and a second metal alloy made up of 60% copper. What is the mass of the second metal alloy?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

15. The circle $2x^2 + 2y^2 + tx + ty - 60 = 0$ has a radius of $\sqrt{62}$ where t is a positive constant. What is the value of t?

1

$$\left(\frac{t}{-4}\right)^2 + \left(\frac{t}{-4}\right)^2 + 30 \sim 62$$

ПАРАМЕТРЫ РЕГРЕССИИ

$t = 16$

СТАТИСТИКА

$RMSE = 0$

НЕВЯЗКИ

e_1

(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

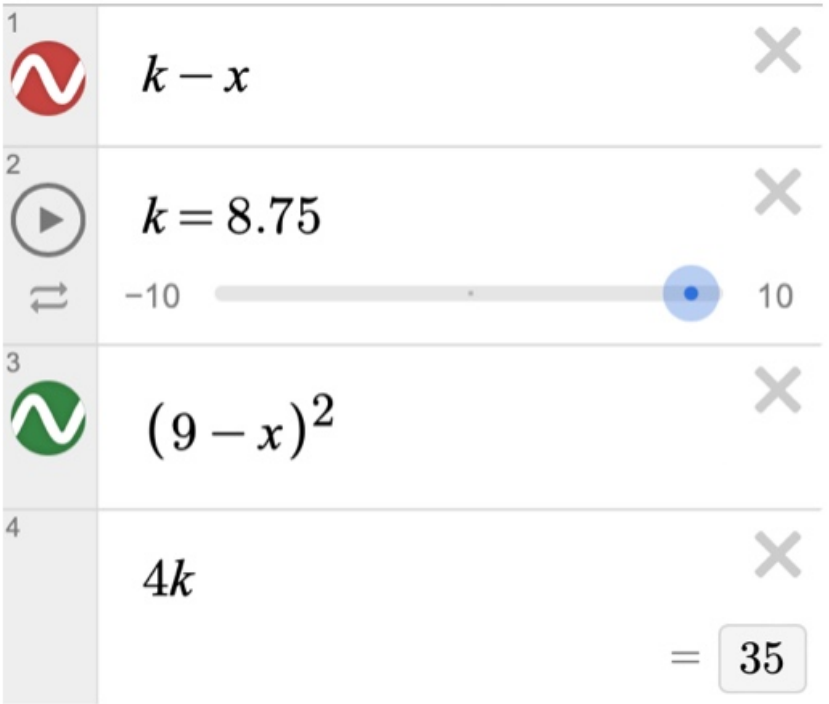
ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The following equation $\sqrt{k-x} = 9 - x$ has one real solution. What is the minimum value of $4k$?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

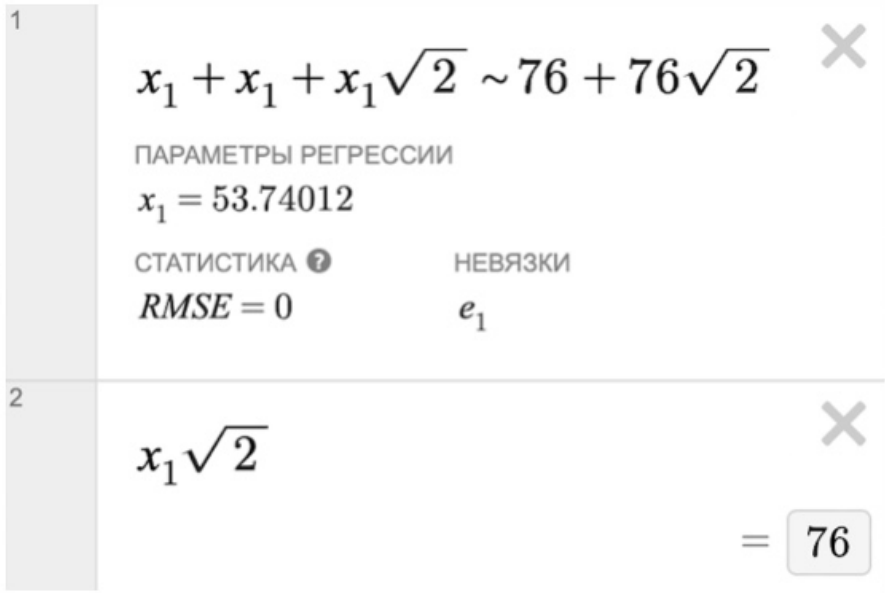
ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The perimeter of a right isosceles triangle is $76 + 76\sqrt{2}$. What is the length of the hypotenuse?



(+994) 50 999 17 27

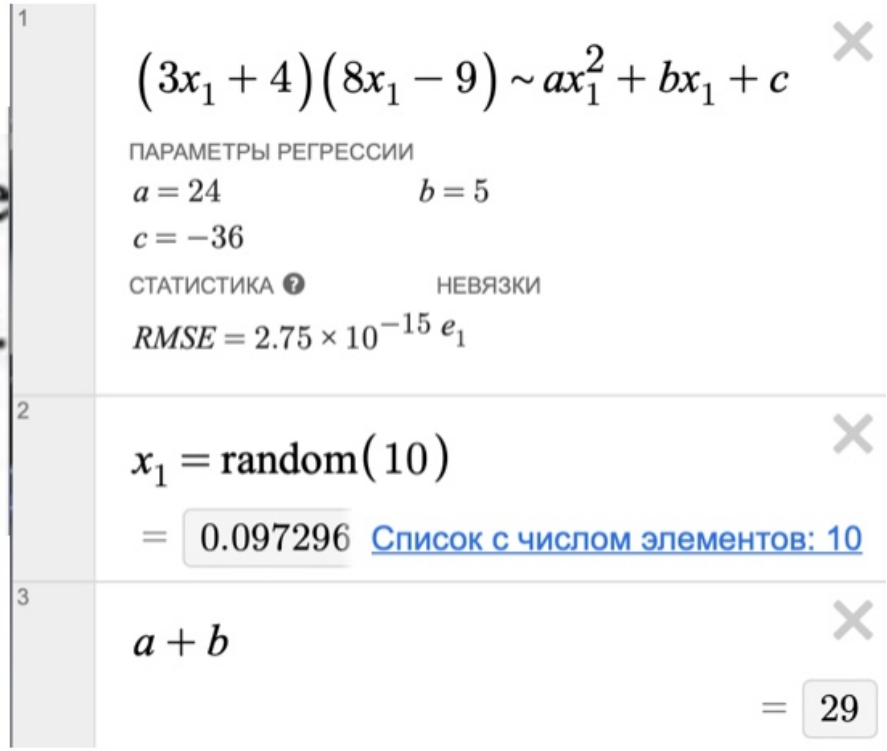
Orxanmath-800.io

satmath_orkhan

Advanced Digital Sat Math Course

Desmos Method For Each Question

The expression $(3x+4)(8x-9)$ can be written in the form ax^2+bx+c, where a, b, and c are constant. What is the value of $a+b$?



(+994) 50 999 17 27

Orxanmath-800.io

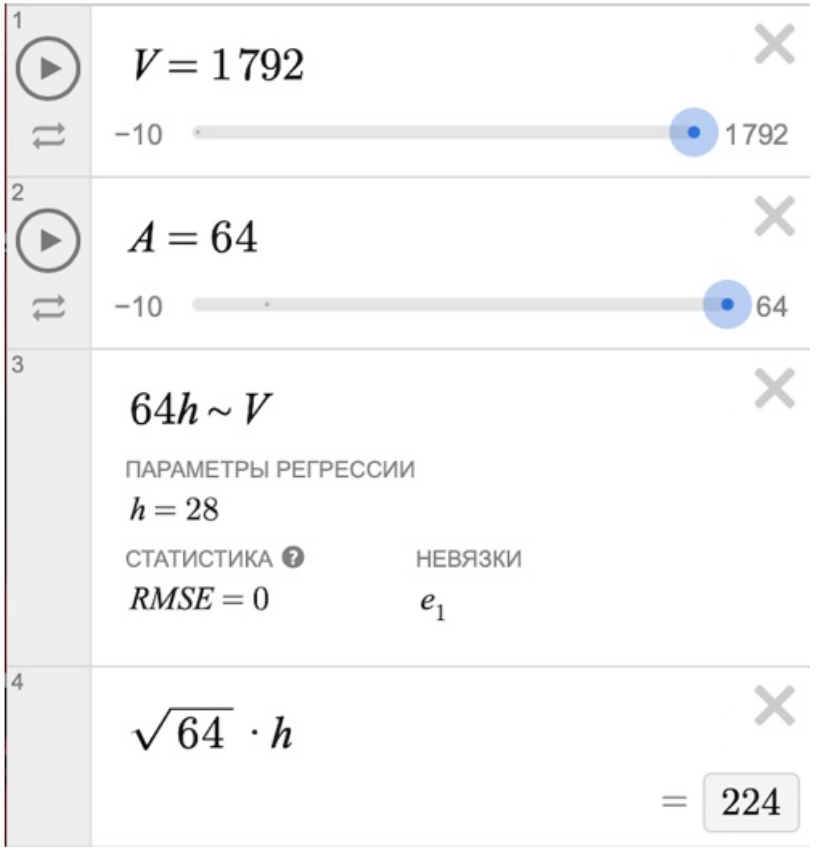
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The volume of right rectangular prism with a square base is 1,792 cubic centimeters. If the area of the square base is 64 square centimeters, what is the area, in square centimeters, one of the four lateral faces of the prism?



(+994) 50 999 17 27

Orxanmath-800.io

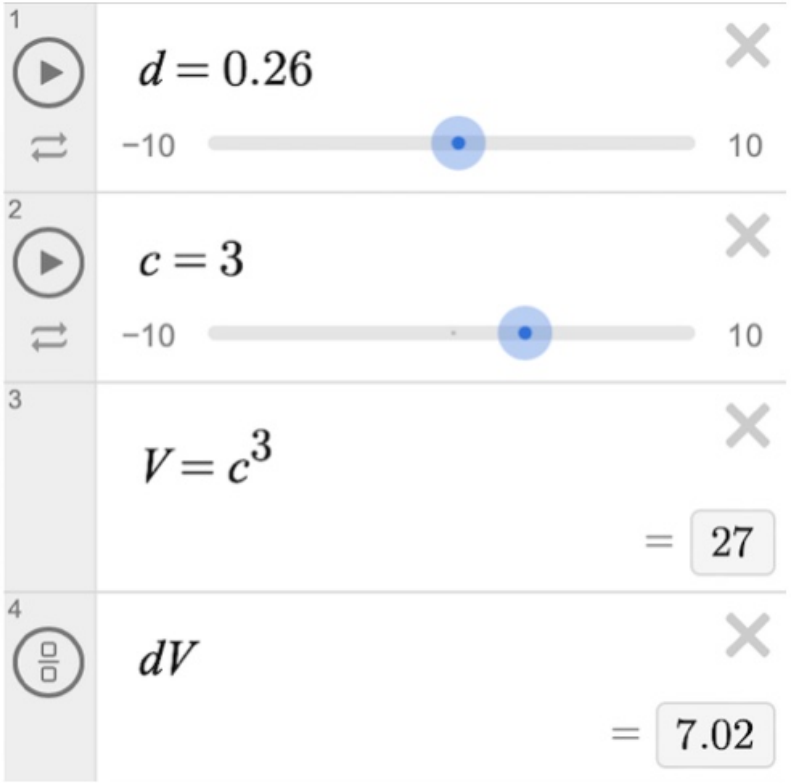
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The edge length of a cube, which has a density of .26 g/cm3 , is 3.000 cm. What is the mass of the cube?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

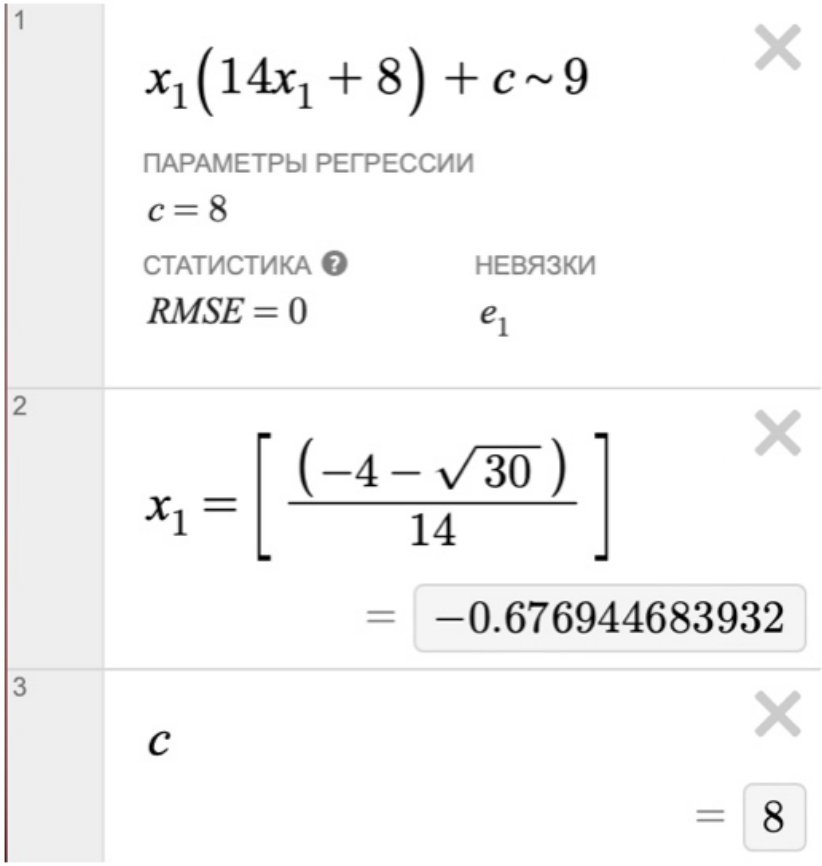
ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

For the equation, $x(14x + 8) + c = 9$, one possible solution is $\frac{-4 - \sqrt{30}}{14}$. What is the value of c?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

Advanced Digital Sat Math Course

Desmos Method For Each Question

The proposal for a development project was included on a city's election ballots. A local TV station reported that 6 times as many people voted in favor of the proposal as people who voted against it. If 1,770 more people voted in favor of the proposal than those who voted against the proposal. How many people voted against the proposal?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

A line intersects two parallel lines, forming four a
angles and four obtuse angles. The measure of o
acute angles is (4x - 410) . The sum of the measu
one of the acute angles and three of the obtuse a
(-8x + w) . What is the value of w?

1

$$(4x_1 - 410) + 3(180 - 4x_1 + 410) \sim (-8x_1 + w)$$

ПАРАМЕТРЫ РЕГРЕССИИ

$w = 1360$

СТАТИСТИКА НЕВЯЗКИ

$RMSE = 1.61 \times 10^{-13}\, e_1$

2

$x_1 = \text{random}(10)$

$= 0.232613455084 \quad 0.87$ Список с числом элементов: 10

3

w

$= 1360$

(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

Object A's speed is 850% greater than B's, and A's speed is 1.2% of C's. If C's speed is $p\%$ of B's, find p.



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

Advanced Digital Sat Math Course

Desmos Method For Each Question

A scientist studied a young deer and found it had **45 kg of muscle**, making up **30%** of its total composition. The rest was **40% bone** and **60% fat**. How many kilograms of the deer's composition



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

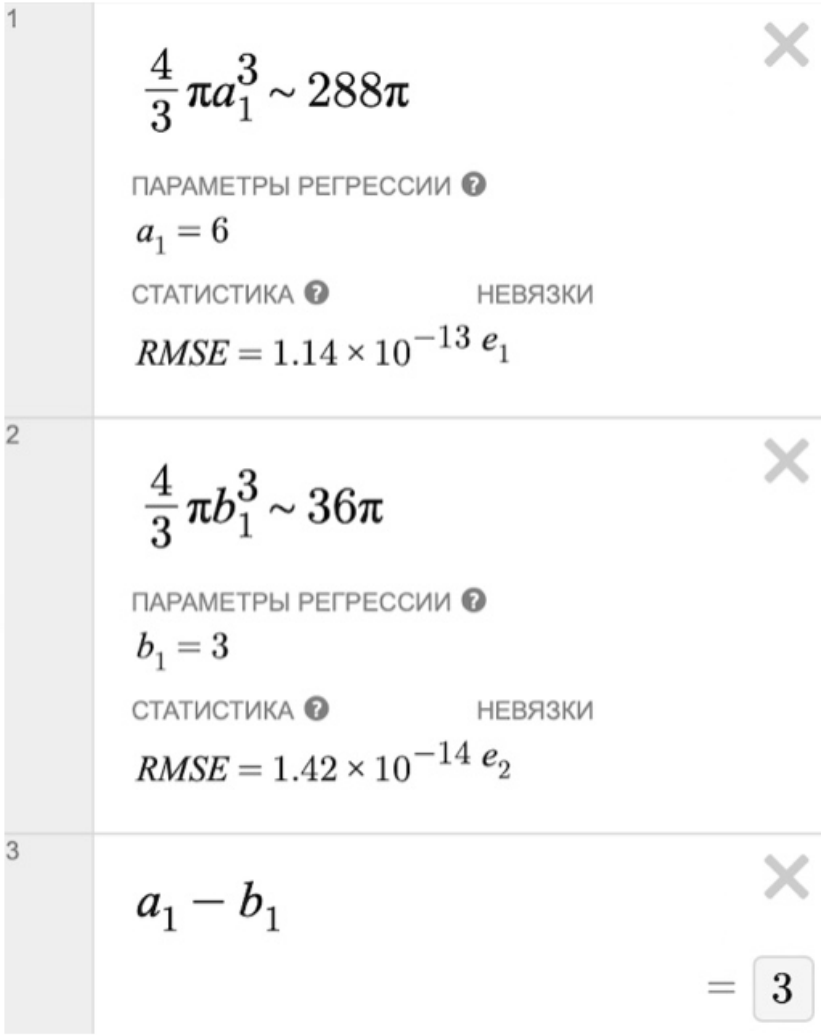
ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

Two spheres have volumes 288π and 36π. What is the difference in their radii?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

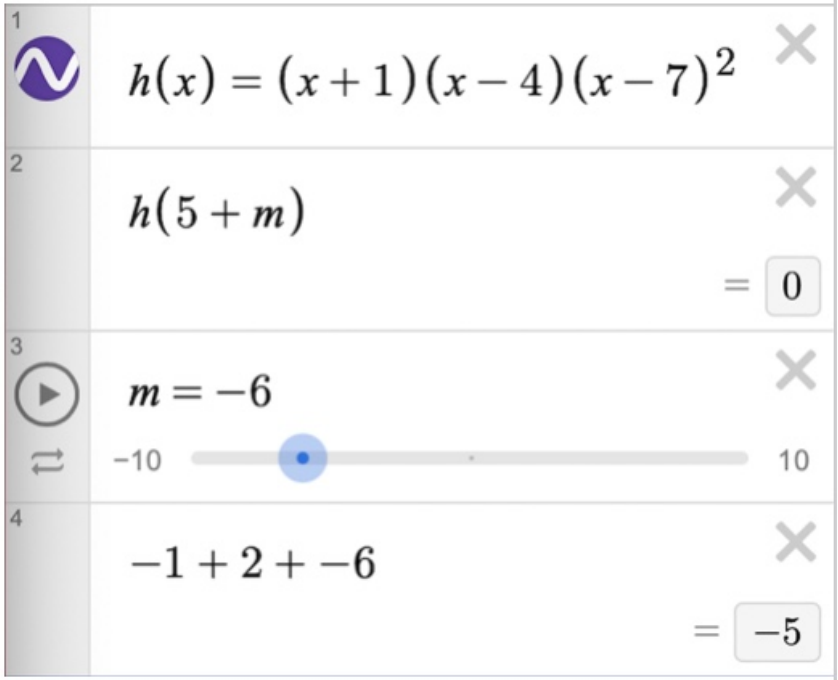
ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The function h is defined by $h(x) = (x + 1)(x - 4)(x - 7)^2$. The value of $h(5 + m)$ is 0, where m is a constant. What is the sum of all possible values of m?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

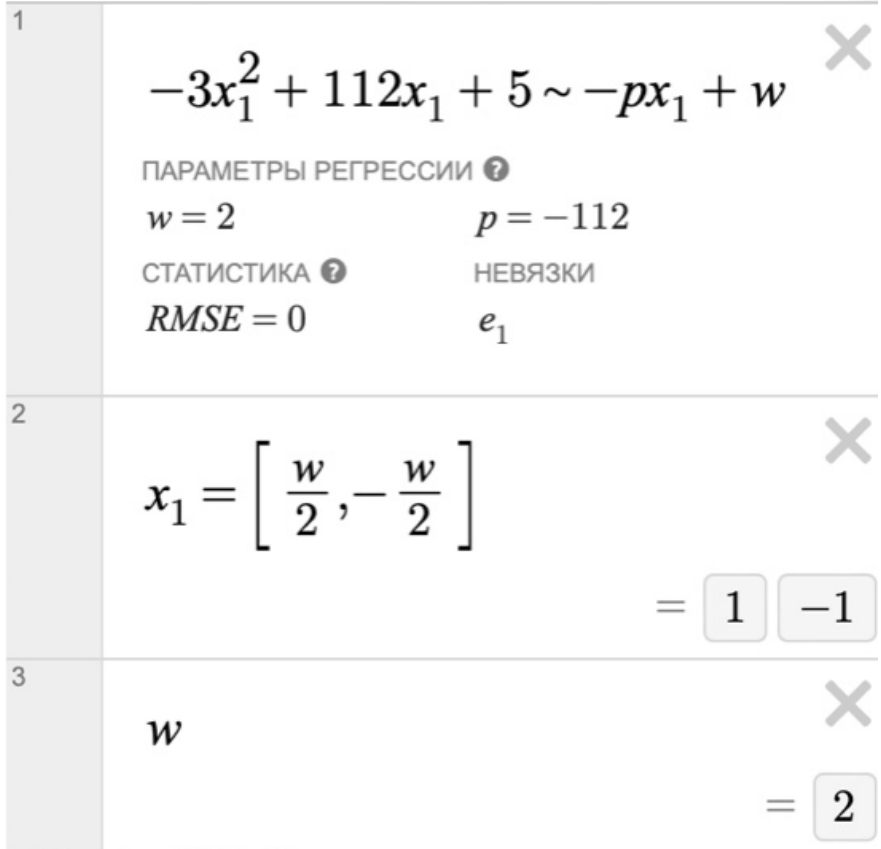
ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

25. The solutions to the following equation, $-3x^2 + 112x + 5 = -px + w$, where p & w are constants, are $\left\{\frac{w}{2}, -\frac{w}{2}\right\}$. Find a possible value of w.



(+994) 50 999 17 27

Orxanmath-800.io

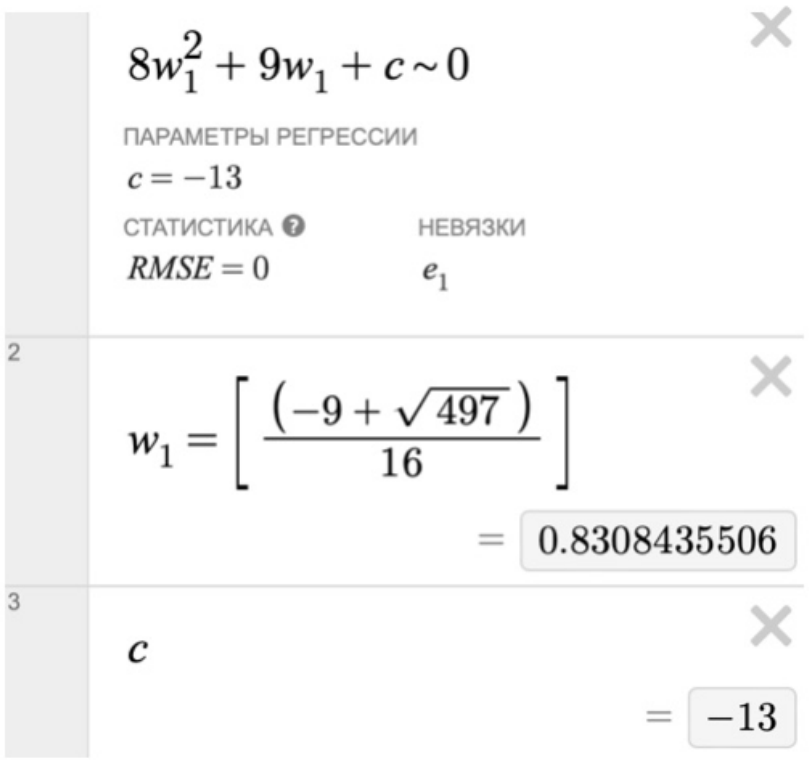
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The equation $8w^2 + 9w + c = 0$ has a solution of $\frac{-9 + \sqrt{497}}{16}$. What is the value of c?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH

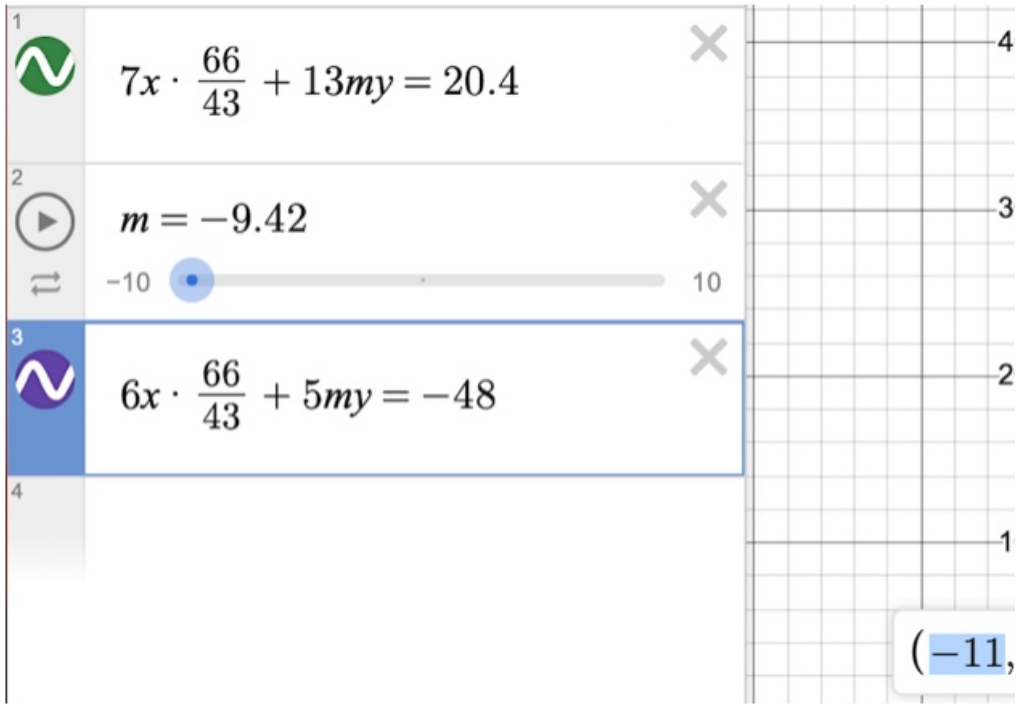
Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

$$7kx + 13my = 20.4$$
$$6kx + 5my = -48$$

In the given system of equations, k and m are constants. The system has a solution of $\left(\frac{66}{43}, y\right)$. What is the value of k ?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

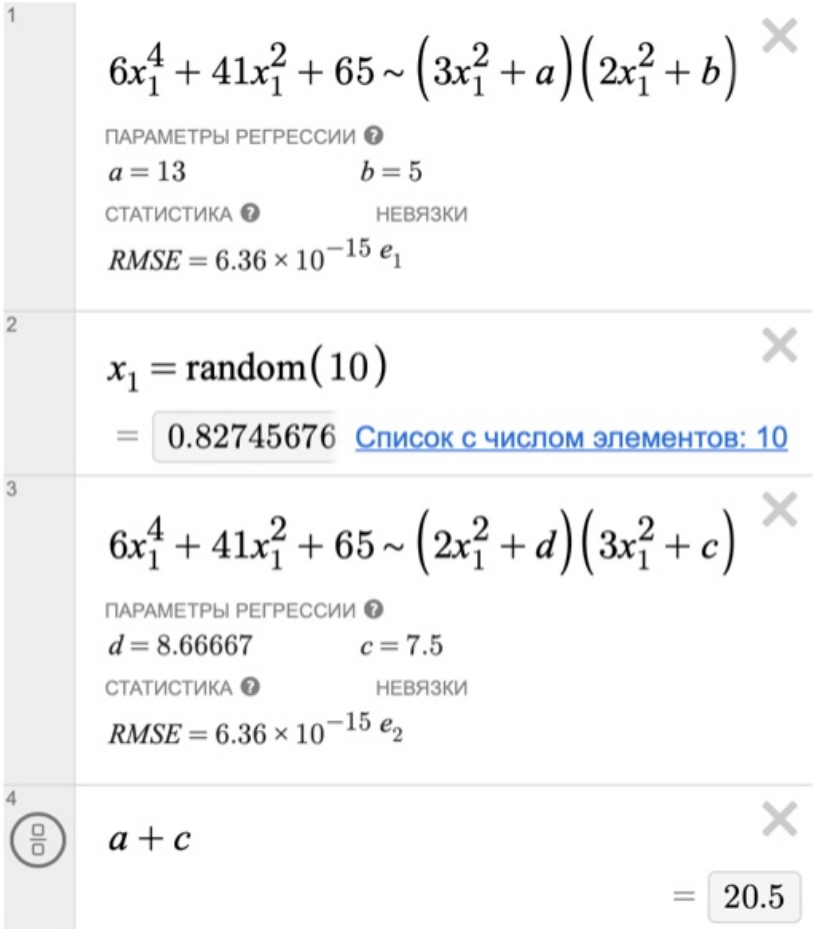
ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

17. The expression $6x^4 + 41x^2 + 65$ can be factored as $(3x^2 + a)(2x^2 + b)$ and $(3x^2 + c)(2x^2 + d)$ where a & b are positive integers and c & d are positive non-integers. What is the value of $a + c$?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

Volume	Radius
A: 72π	R
B: 9,000π	kR + 12

The cylinders A and B are similar. Find the scale factor k between them.

1 $A = 72\pi$

$= 226.194671058$

2 $B = 9000\pi$

$= 28274.3338823$

3 $\sqrt[3]{\frac{B}{A}}$

$= 5$

4 $5r_1 \sim r_1 + 12$

ПАРАМЕТРЫ РЕГРЕССИИ

$r_1 = 3$

СТАТИСТИКА

$RMSE = 0$

НЕВЯЗКИ

e_1

(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

$f(x) = ab^x$ where a & b are positive constants. If $f(n\text{-}1)=f(n) + .86*f(n\text{-}1)$, find the value of b.

1 $f(x) = ab^x \{a > 0, b > 0\}$

2 $f(n-1) \sim f(n) + 0.86f(n-1)$

ПАРАМЕТРЫ РЕГРЕССИИ

$a = 0.387869$ $b = 0.14$

$n = 1.07842$

СТАТИСТИКА НЕВЯЗКИ

$RMSE = 0$ e_1

3 b

$= 0.14$

(+994) 50 999 17 27

Orxanmath-800.io

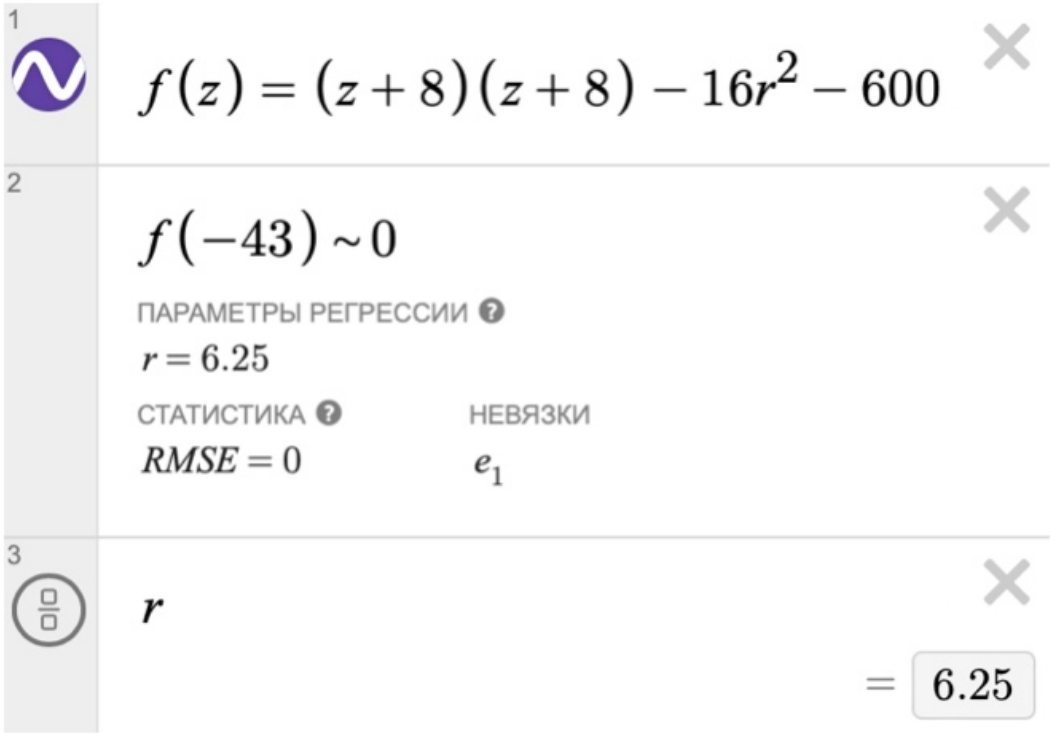
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

21. For the function, $f(z) = (z + 8)(z + 8) - 16r^2 - 600$, a solution is $z = -43$ where r is a constant. What is the value of r?



(+994) 50 999 17 27

Orxanmath-800.io

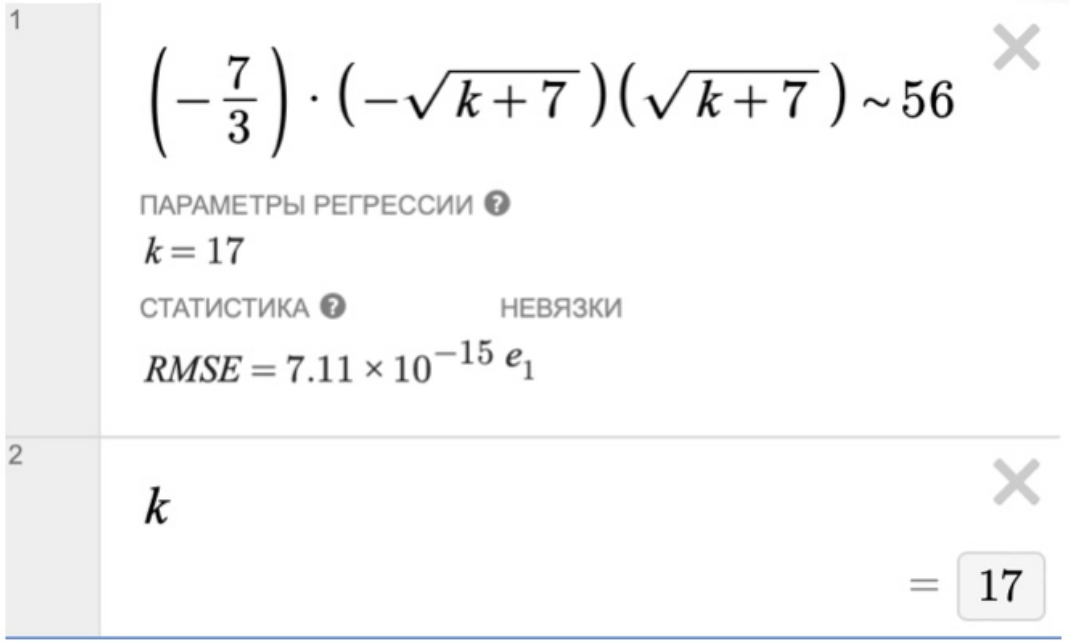
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

7. For the following equation, $\left(\frac{2}{7}\right)(3x+7)\left(x+\sqrt{k+7}\right)\left(x-\sqrt{k+7}\right)=0$, the product of the roots = 56. Find the value of k.



(+994) 50 999 17 27

Orxanmath-800.io

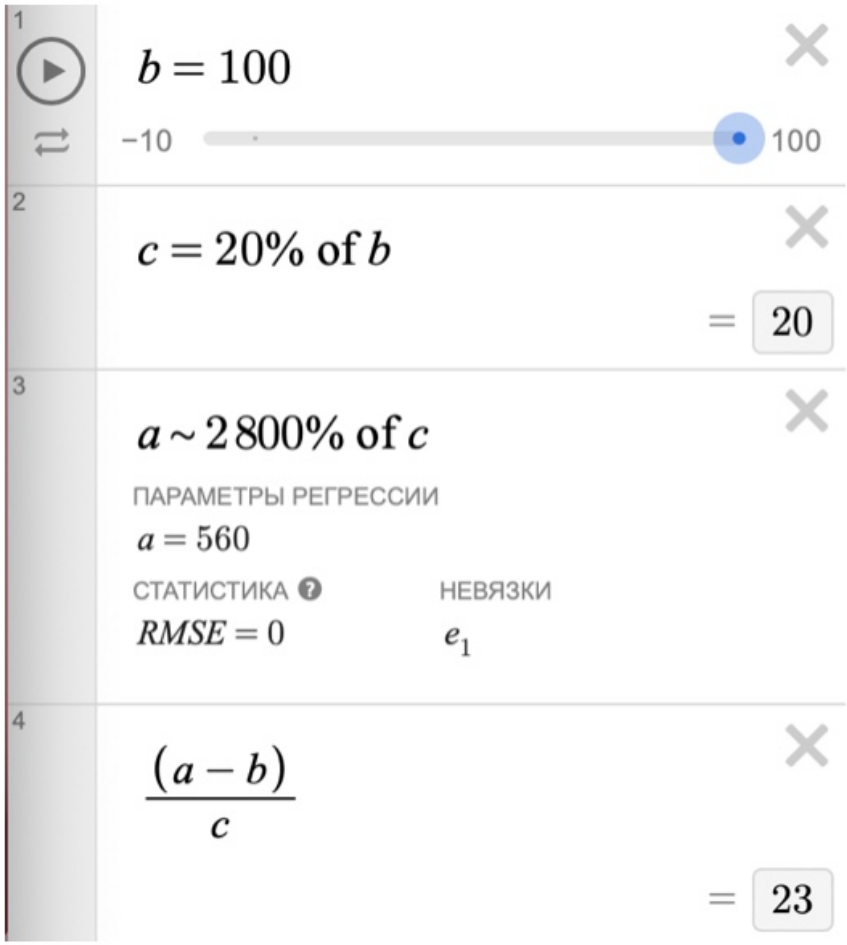
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

12. If $a = 2800\%$ of c and $c = 20\%$ of b, where a, b, c, are positive constants, then $a - b = wc$. Find the value of w.



(+994) 50 999 17 27

Orxanmath-800.io

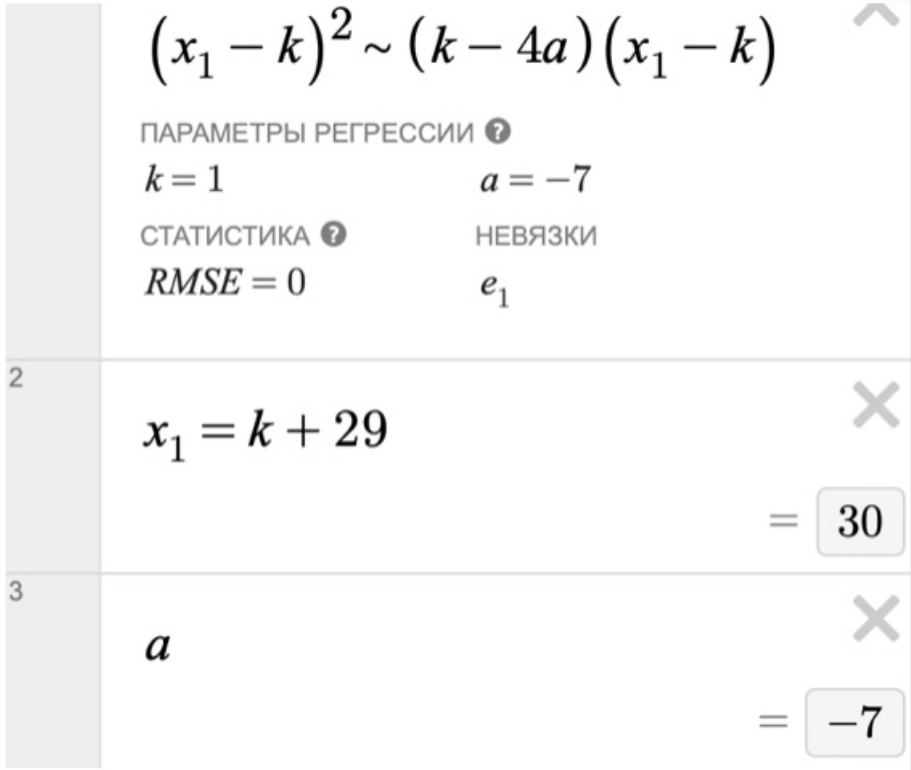
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

11. $(x-k)^2=(k-4a)(x-k)$. For the given equation, the sum of the roots equals $2k+29$. Find the value of a.



(+994) 50 999 17 27

Orxanmath-800.io

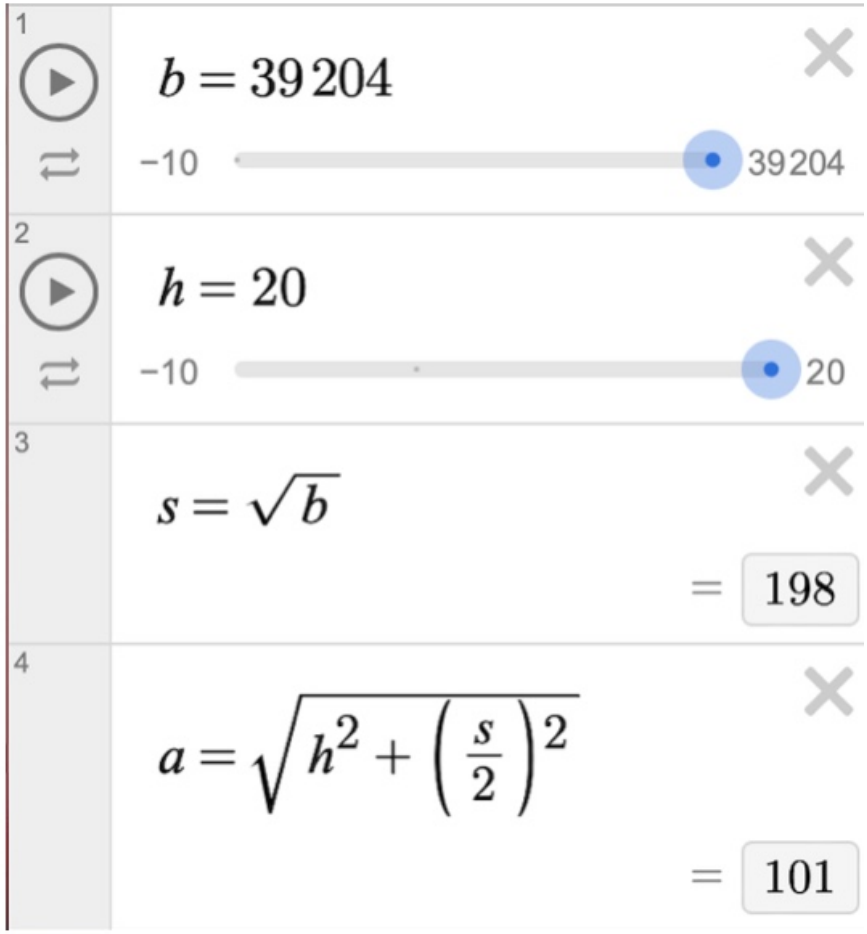
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The base area of a square base right pyramid is 39,204 cm^2. If the height of pyramid is 20 cm, what is the slant height of the pyramid, in cm?



(+994) 50 999 17 27

Orxanmath-800.io

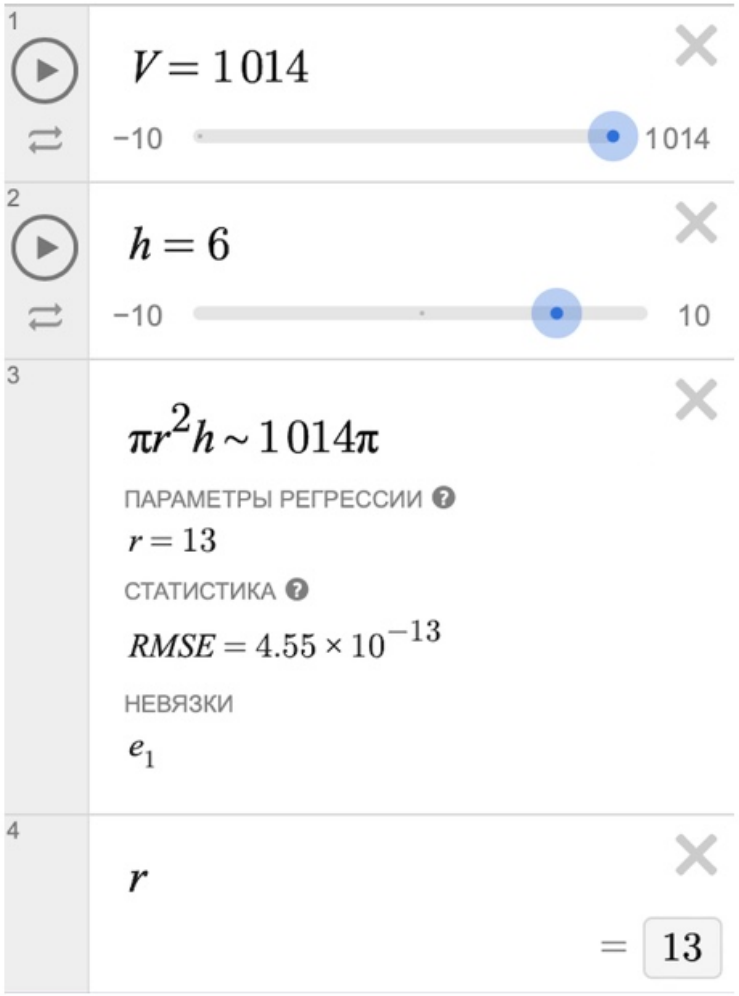
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The volume of a right circular cylinder is 1014π cm^3. If the height of the cylinder is 6 cm, what is the internal radius of the cylinder, in cm?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH

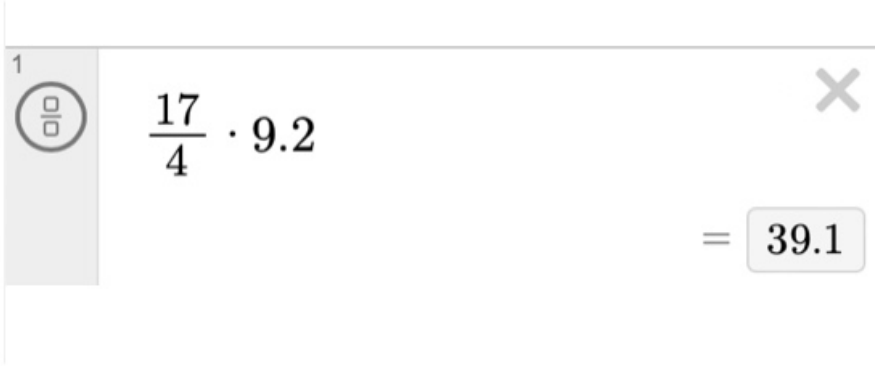
Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

$$f(x) = \frac{17}{4}(x + 42) - 8$$

For the given function, when x increases by 9.2 units, $f(x)$ increases by c units. What is the value of c?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

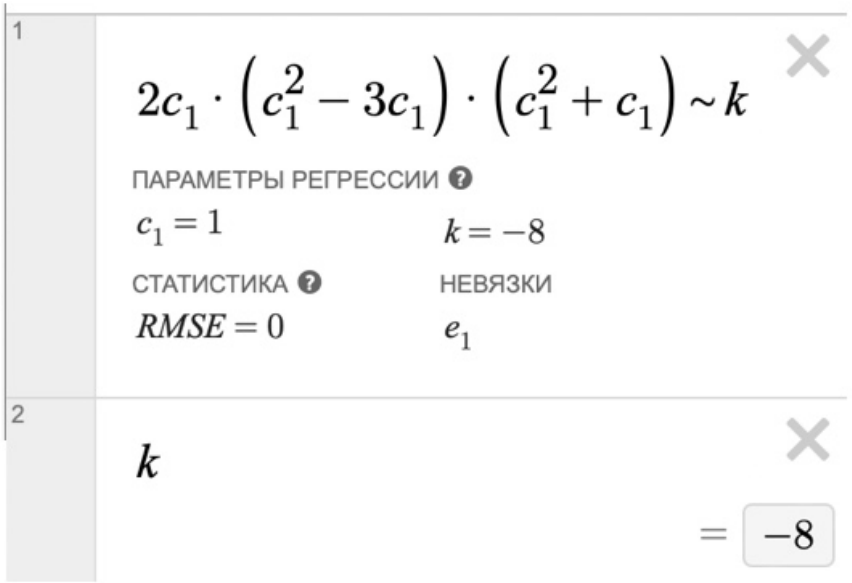
ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

$f(x) = 2c \cdot (x - 3c) \cdot (x + c)$

For the given parabola, c is a positive constant and (h, k) is the vertex of the parabola. If $h = c^2$, what is the value of k?



(+994) 50 999 17 27

Orxanmath-800.io

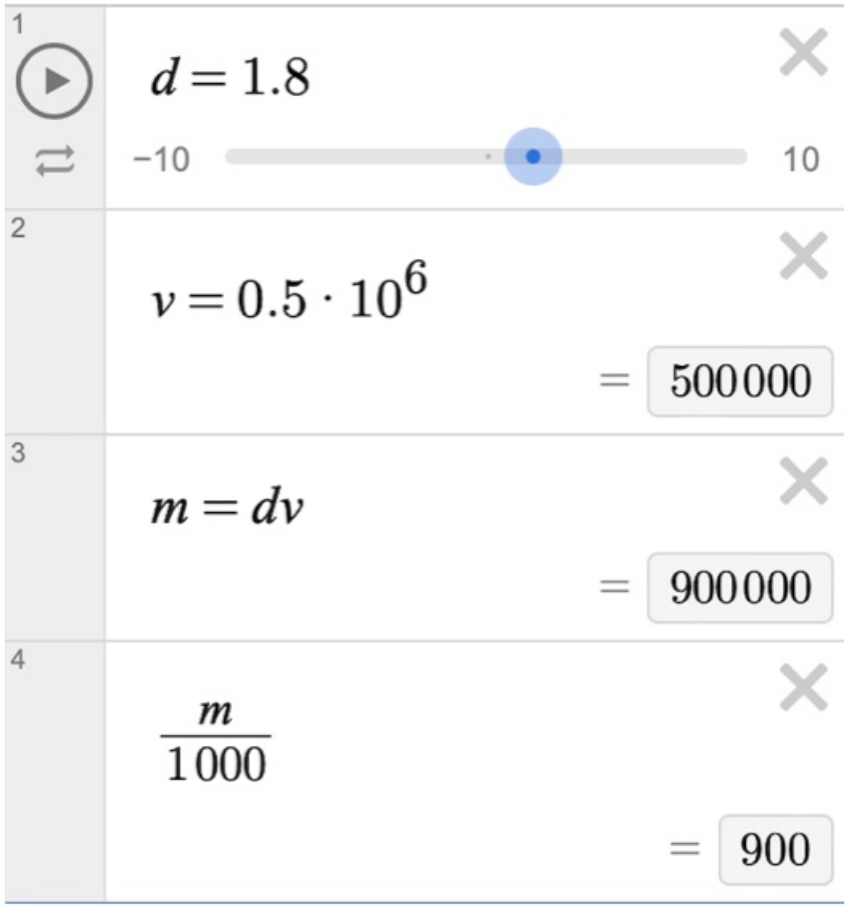
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The density of magnesium is 1.8 grams per cubic centimeter. If the volume of the magnesium is 0.5 cubic meters, what is its weight in kilograms?



(+994) 50 999 17 27

Orxanmath-800.io

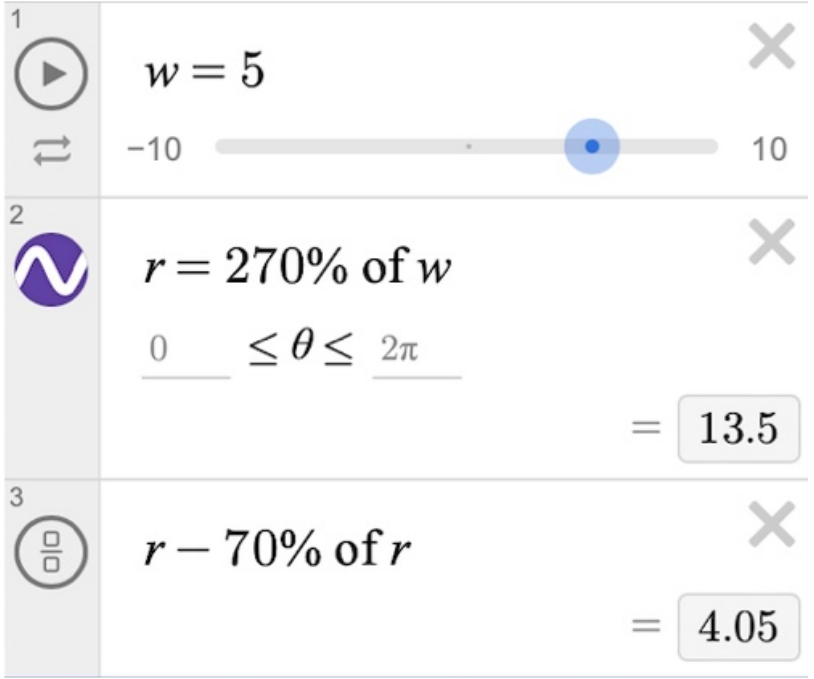
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

A clothing store buys shirts at a wholesale price of 5.00 dollars each and resells them each at a retail price that is 270% of the wholesale price. At the end of the season, any remaining shirts are marked at a discounted price that is 70% off the retail price. What is the discounted price of each remaining shirt, in dollars?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

After 20% of the original number of objects in a group were removed from the group, 180 objects remained in the group. How many objects were removed from the group?



(+994) 50 999 17 27

Orxanmath-800.io

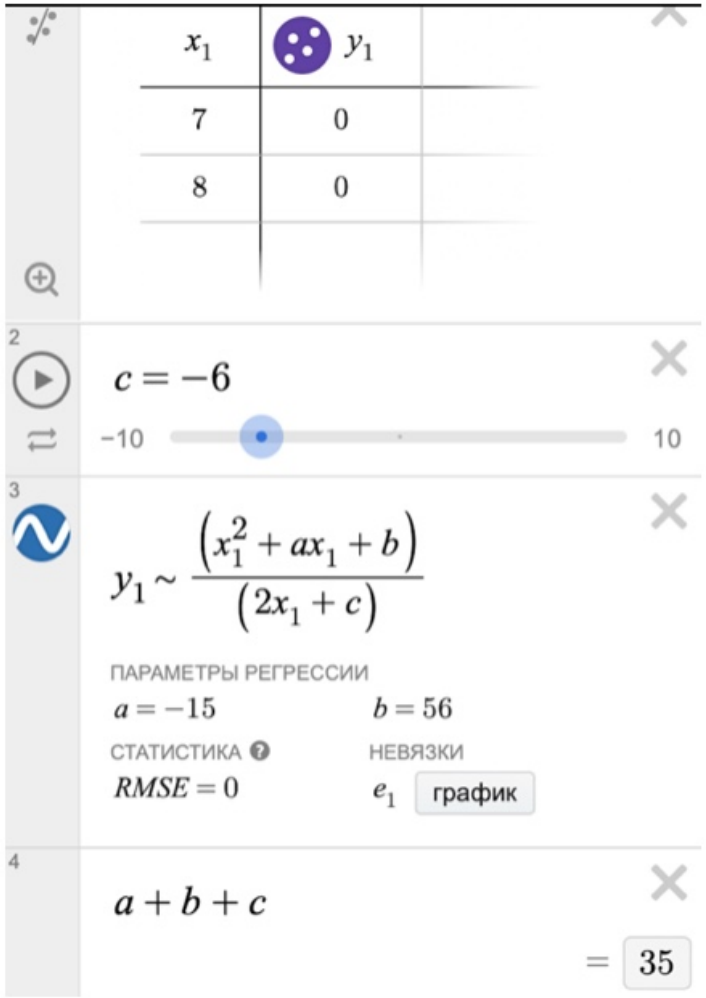
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The function $f(x) = \frac{x^2+ax+b}{(2x+c)}$ where a, b, c are constants, does not touch the line $x = 3$ and $f(x) = 0$ for both $f(7)$ and $f(8)$. Find $a + b + c$.



(+994) 50 999 17 27

Orxanmath-800.io

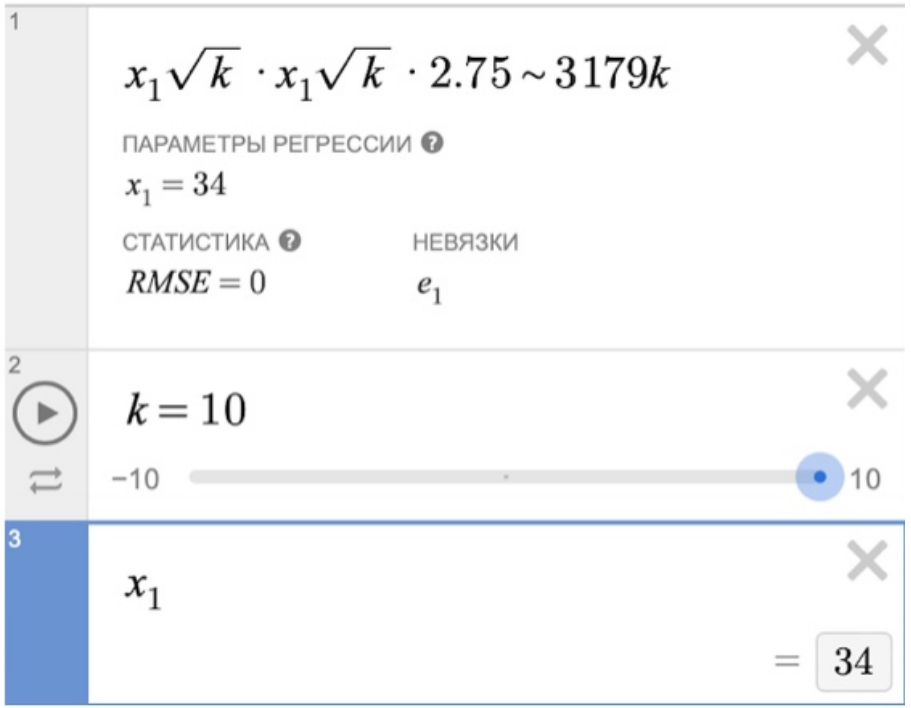
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

A rectangular area consists of 3,179 equal squares where each square has an area of k . If the length of the rectangular area is 2.75 times the width and the width is equal to $x\sqrt{k}$, what is the value of x ?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH

Sat_800

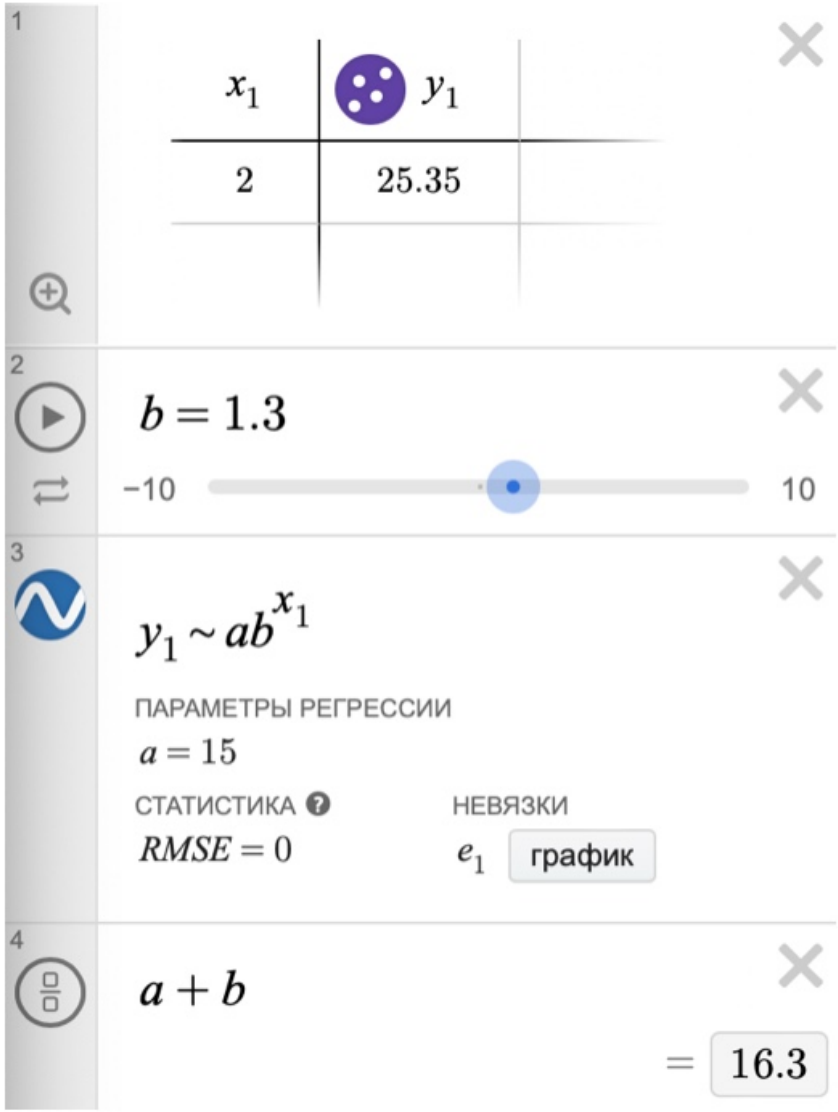
Advanced Digital Sat Math Course

Desmos Method For Each Question

The given equation is

$$f(x) = a \cdot b^x$$

For the given function, a and b are constants. When x increases by 1 unit, $f(x)$ increases by 30%. If $f(2) = 25.35$, what is the value of $a + b$?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH

Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The composition of metal alloy consists of 4 different metals: iron, silver, gold and bronze. The mass of iron is at least 65% less than the mass of bronze, and total mass of the gold and bronze is no less than 400% of the mass of iron. If the mass of bronze is 20% more than the mass of silver which has a mass of 150 grams, what is minimum mass of the gold?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH

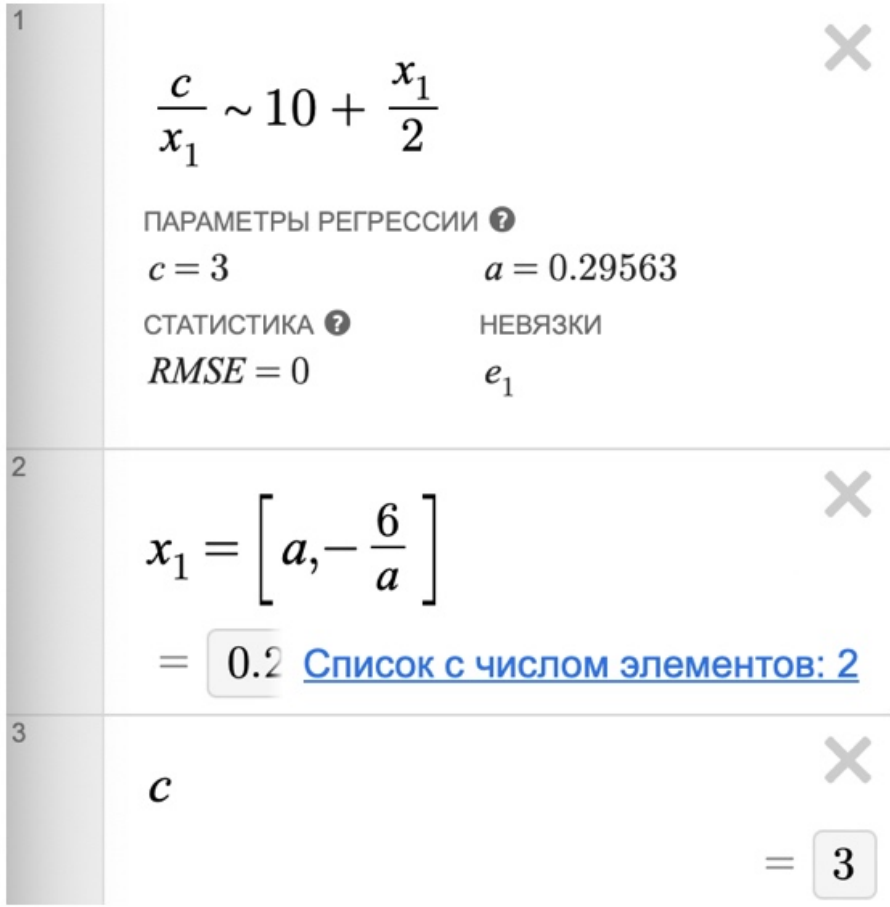
Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

$$\frac{c}{x} = 10 + \frac{x}{2}$$

For the given equation, c is a constant. If the product of the two distinct solutions of the given quadratic equation is -6, what is the value of c?



(+994) 50 999 17 27

Orxanmath-800.io

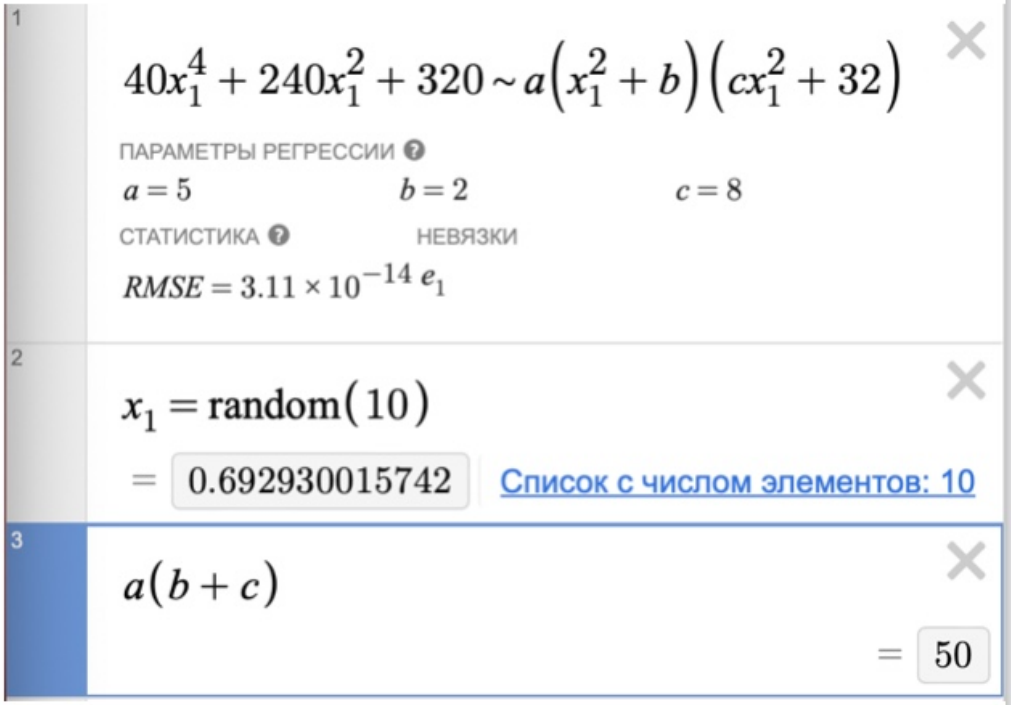
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

The function $40x^4 + 240x^2 + 320$ can be factored in the form of $a(x^2 + b)(cx^2 + 32)$, where is a, b, and c are positive integer constants. What is the value of $a(b + c)$?



(+994) 50 999 17 27

Orxanmath-800.io

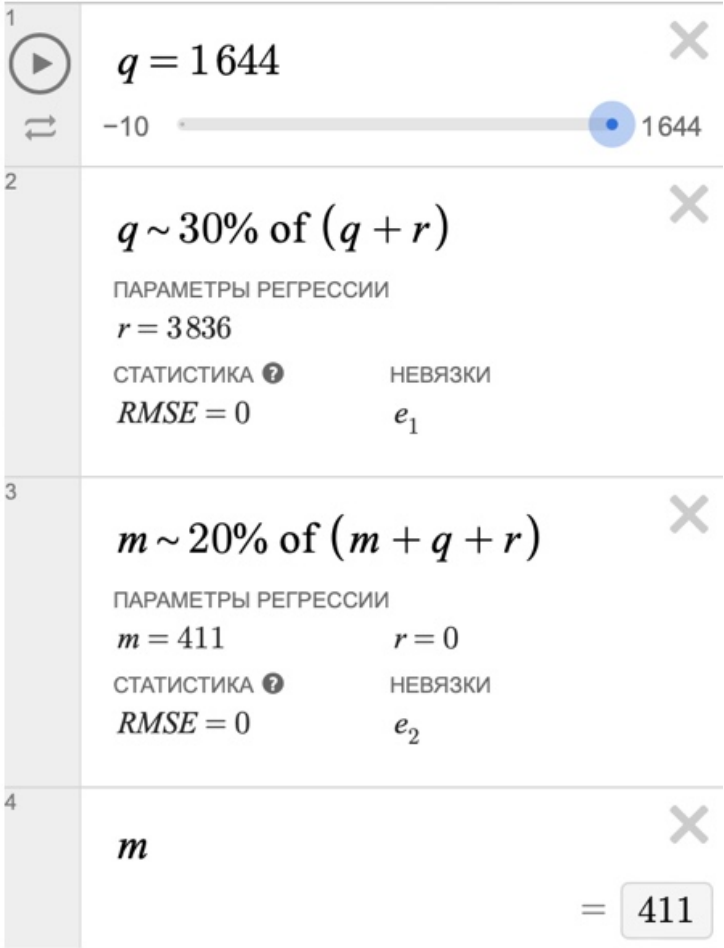
satmath_orkhan

ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

A number m is 20% of $m + q + r$, where q is 30% of $q + r$, and $q = 1644$. What is the value of m?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

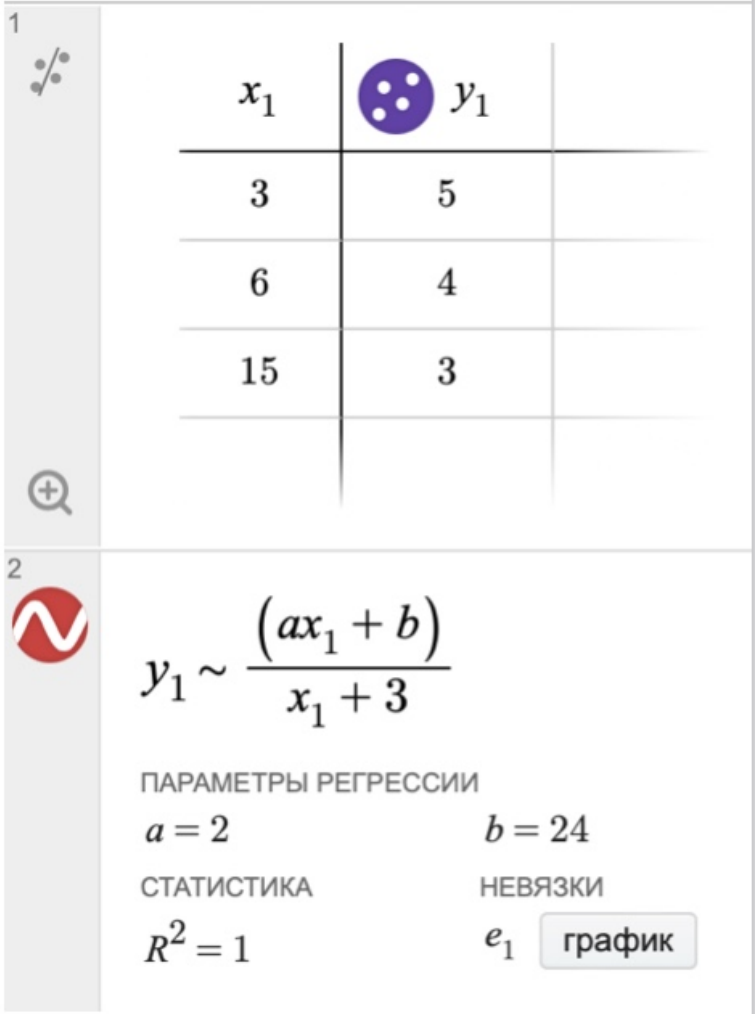
ORXANMATH Sat_800

Advanced Digital Sat Math Course

Desmos Method For Each Question

x	$g(x)$
3	5
6	4
15	3

Some points on the graph of $g(x) = \frac{f(x)}{x+3}$ are given, where $f(x)$ is a line. What is the y-coordinate of the y-intercept of $f(x)$?



(+994) 50 999 17 27

Orxanmath-800.io

satmath_orkhan

ORXANMATH

Sat_800