Cube root 64/27

To continue to benefit from our site, we ask that you confirm your identity as a person. Thank you so much for your cooperation. Use this calculator to find the cube root of positive or negative numbers. Given the number X, the cube root of x is a number such as a3 = x. If x positive is a positive, x is negative, a negative. Cube roots are a special form of our common radicals calculator. Sample Cube Roots: 64 or 64 radical {64} 3. -64 of 3 or -64 of radical 3. 8 cube root \(\sqrt[3]{8} = 2 \). The cube root of 10 is written as \(\sqrt[3]{10} = 2.154435 \). The cube root of x is the same as x, which is raised to 1/3 power. \(\sqrt[3]{x} = x^{\frac{1}{3}} \). The common definition of the cube root of a negative number is (-x)1/3 = -(x1/3). [1] For example: -27 cube roots are written as \(\sqrt[3]{-27} = -3 \). The cube root of -8 is written as \(\sqrt[3]{-8} = -2 \). The cube root of -64 is written as \(\sqrt[3]{-64} = -4 \). Cube roots (from 1 to 10 for integer results) Cube root 1 cube root 8 cube root 2 cube root 27 is 3 Cube root 64 4 Cube root 125 5 Cube root 216 6 Cube root 343 512 7 Cube root 729 9 Cube root 1000 is 10 fraction bases use our calculator for Fraction bases to calculate. References [1] Weisstein, Eric W. Cube Root. MathWorld from - A Wolfram Web Resource. Cube Root Cube roots additional reading: Is Math Forum 0 an excellent square? 64 x 27= 'root(3)(64 xx 27)'= 'sqrt(4 xx 4 xx 4 xx 4 xx 3 xx 3 xx 3)'= 4 x 3= 12 Is there an error in this question or solution? Page 2729 x 8000 729 x 8000= 'root(3)(729 xx 8000)'='sqrt(9 xx 9 xx 9 xx 20 xx 20 xx 20 xx 20)'= 9 x 20= Find the 180 cube root Is there an error in this question or solution? Page 3375 x 512 3375 x 512= 'root(3)(3375 xx 512)'= 'sqrt(15 xx 15 xx 15 xx 8 xx 8)' = 15 x 8= Find 120 cube roots Is there an error in this question or solution? Page 4 -216 -216= 'root(3)(-216)'= 'sqrt(-6 xx -6 -6)'= -6 cube root find this question or is there an error in the solution? Page 5 -512 -512= 'root(3)(-512)'= 'sqrt(-8 xx -8)'= -8 find cube root Is there an error in this question or solution? Page 6 -1331 -1331= 'root(3)(-1331)'= 'sqrt(-11 xx -11 xx -11)'= -Find 11 cube roots Is there an error in this question or solution? Page 7 '-(27)/(125)' '-(27)/(125)/'' = '-sqrt(27)/(sqrt(125)' = '- sqrt(3 xx 3 xx 3)/(5 xx 5)' = '- (3)/(5)' Is there an error in this question or solution? Find the cube root of page 8 '-(64)/(343)' '-(64)/(343)' = 'root(3)(-64)/root(3)(343)' = 'root(3)(-4 xx -4 xx xx 7 xx 7)' = '(-4)/(7)' Is there an error in this question or solution? Find cube root on page 9 '(-512)/(343)' '(-512)/(343)' = '- root(3)(512/343)' = '- root(3)(8 xx 8 xx 8)/(7 xx 7)' = '- (8)/(7)' Is there an error in this question or solution? Find the cube root of page 10-2197. -2197= 'root(3)(-2197)' = 'root(3)(-13 xx -13 xx -13)'= -13 Is there an error in this question or solution? Page 11 -5832 -5832= 'root(3)(-5832)' 2 5832 2 2916 2 1458 3 729 3 243 3 81 3 27 Find 3 cube roots 9 3 3 1 = 'sqrt(-2 xx -2 xx -3 xx -3 xx -3 xx -3 xx -3 xx -3 xx-3)'== - 2 x -3 x -3= -18 Is there an error in this question or solution? Page 12 -2744000 -2744000= 'root(3)(-2744000)' 2 2 7444000 2 1372000 2 686000 7 343000 7 70 cube root find 00 10 1000 10 10 1 = 'sqrt(-2 xx -2 xx -2 xx -7 xx -7 xx -7 xx -10 xx -10 xx -10 xx -10 xx -10 xx -10 xx -10 xx -7 x -10)'= -2 x -7 x -10= -140 Is there an error in this question or solution? Page 132.744 Find 2,744 cube roots = 'root(3)(2744/1000)' 2 2744 2 1372 2 686 7 343 7 49 7 7 1' = root(= root3)(2 xx 2 xx 2 xx 7 xx 7 xx 7)/(10 xx 10 xx 10)' = '(2 xx 7)/(10)' = '(14)/(10)' = 1.4 Is there an error in this question or solution? Page 149.261 Find 9,261 cube roots = 'root(3)(9261/1000)' = 'sqrt((3 xx 3 xx 7 xx 7 xx 7)/(10 xx 10 xx 10 xx 10 3 9261 3 3087 3 1029 7 343 7 49 7 7 1 ='(3 xx 7)/(10)' = '(21)/(10)' = 2,1 Is there an error in this question or solution? Page 150.00027 Find cube root 0.000027 = 'root(3)(27)/(1000000)' = 'root(3)(3 xx 3 3)/(100 xx 100 xx 100)' = '(3)/(100)' = 0.03 Is there an error in this question or solution? Page 160-0.512 -0.512 = 'root(3)(-512)/(1000)' = 'sqrt(-8 xx -' 8 xx -8)/(10 xx 10 xx 10)' = '(-8)/(10)' = -0.8 Is there an error in this question or solution? Page 17 Find root - 15,625. -15,625 = 'root(3)((-15625)/(1000)' = 'sqrt((-(5 xx 5 xx 5) xx (5 xx 5 xx 5))/(10 xx 10 xx 10 xx 5 10)' = '(-5 xx 5)/(10)' =

'(-25)/(10)' = - 2.5 5 15625 5 3125 5 625 5 125 5 25 5 5 1 Is there an error in this question or solution? Page 18 -125 x 1000 -125 x 1000= 'sqrt(-125 xx 100)'= 'sqrt(-(5 xx 5 xx 5) xx (10 xx 10 xx 10)'= -5 x 10= -50 cube root Find an error in this question or solution? Rearrange the equation by removing the equal sign to the right of the equal sign from both sides of the equation : x^3-(64/27)=0 Step-by-step solution :Step 1 : 1 : 64 Simplify —— 27 Equation 1 step End : 64 (x3) — —— = 0 2 7 Equivalent Fraction to rewrite whole : 2.1 Withdrawal of the whole as a fraction using 27 as a fraction of the denominator from a whole : x3 x3 • 27 x3 = —— = ——————— 1 27 Equivalent fraction : The generated fraction looks different but has the same value as the entire Common denominator : fraction and other fractions in the calculation share the same denominatorAding fractions with a common denominator : 2.2 Adding two equivalent fractions Now put together two equivalent fractions with common denominators, Reduce to the lowest terms if possible after putting the total or difference on the common denominator: x3 • 27 - (64) 27x3 - 64 ——————————————— = ———————————— 27 27 Cubes The difference works : 2.3 Factoring: 27x3 - 64 Theory : Difference of two excellent cubes , a3 - b3 (a-b) • (a2 +ab +b2)Evidence : (a-b)•(a2+ab+b2) = a3+a2b+ab2-ba2-b2-b3 = a3+(a2b-ba2)+(ab2-b2a)-b3 = a3+b3+b3+b3+b3+b3+b2+0+b3 = +b3Check : 27 cubes 3 Pull : 64 is the cube of 4 Control : x3 x1Factorization cube : (3x - 4) • (9x2 + 12x + 16) Trying to factor by dividing the middle term 2.4 Factoring 9x2 + 12x + 16 First period, 9x2 coefficient 9. The middle term is +12x coefficient 12. Last term fixed, +16 Step-1 : Multiply the coefficient of the first term by 9 • 16 = 144 Steps-2 : There are two factors of 144 equal to the middle term coefficient, the sum of which is 12. -144 + -1 = -145 -72 + -2 = -74 -48 + -3 = -51 -36 + -4 = -40 -24 + -6 = -30 -18 + -8 = -26 Fortidiness, printing 24 lines that could not find these two factors was suppressedSpedSping: No such two factors can be found!! Conclusion : Trinomial ——————————————————————— 2. If a fraction is equal to zero, the share above the fraction line must be equal to zero. To get rid of the denominator, Kaplan bumps both sides of the equation with the denominator. Here's how: (3x-4)(9x2+12x+16) ———————————————————— • 27 = 0 • 27 27 Now, on the left side, when canceling 27 denominator, on the right side, zero times something is still zero. The equation now takes its form: (3x-4) • (9x2+12x+16) = 0Teori - Roots of a product : 3.2 A product of various terms is equal to zero. If a product of two or more terms is equal to zero, at least one of the terms must be zero. Now we will solve each term separately = 0 In other words, we will solve the equation as much as the terms in the product = 0 solves the term = 0 product = 0. Single Variable Equation Solving : 3.3 Solve : 3x-4 = 0National 4 on both sides of the equation : 3x = 4 Divide both sides of the equation by 3: x = 4/3 = 1.333 Parabola, Finding Vertex : 3.4 Finding the Vertex of parabola : 3.4 Finding the Vertex of parabola and the highest or lowest point called vertex . Our parabola opens and accordingly has the lowest point (AKA absolute minimum). We know this even before we draw a y because the first period coefficient is 9 positives (greater than zero). Each parabola has a vertical symmetry line that passes through the topline. Due to this symmetry, the symmetry line passes through the mid-point of, for example, the two x-ps of the parabola (roots or solutions). So, parabola really has two real solutions. Parabolas, like ground height, can model many real-life situations of an object that is thrown upwards after a while. The top point of the parabola can provide us with information such as the maximum height that the object thrown upwards can reach. That's why we want to be able to find the coordinates of the hill. For any parabola, Ax2+Bx+C is issued by the x -coordinate -B/(2A) of the peak. In our case, we can calculate the y-coordinate for -0.6667 x when the x coordinate is stuck in the parabola formula -0.6667 x : y = 9.0 * -0.67 * -0.67 + 12.0 * -0.67 + 16.0 or y = 12.000bol, Chart Vertex and X-Intercepts :Root plot for : y = 9x2+12x+16 Axis of Symmetry (dashed) {x}={-0.67} Vertex at {x,y} = {-0.67,12.00} Function nkare 3.5 Solves quadratic equation does not have real roots by solving 9x2+12x+1 6 = 0 Complete the frame divide both sides of the equation by 9: x2+(4/3)x+(16/9) = 0Alttract 16/9 from both sides of the equation : x2+(4/3)x = -16/9My smart bit: Get the X coefficient , which is 4/3, divide it in half , gives 2/3 , and finally 4/4 Add 4/9 to both sides of the equation that gives you 9 : Got on the right side : -16/9 + 4/9 The common denominator of two fractions gives 9 Insertion (-16/9)+(4/9) -12/9 So at the end it is by adding to both sides : x2+(4/4/9 3)x+(4/9) = -4/3Seeing 4/9 has made the left side an excellent square : x2+(4/3)x +(4/9) = (x+(2/3)) • (x+(2/3)) = (x+(2/3))2 Things equal to the same thing are equal to each other. Because x2+(4/3)x+(4/9) = -4/3 = (x+(2/3))2 then, according to the transition law, (x+(2/3))2 = -4/3 Eq to this Equation. #3. #3.5.1 The Square Root Principle says that square roots are equal when two things are equal. (x+(2/3))2 square (x+(2/3))2/2 = (x+(2/3))1 = x+(2/3)1 = x+(2/3)Now, use the Square Root Principle Eq. Applying to #3.5.1: x+(2/3) = √ -4/3 Subseation from both sides to obtain: x = -2/3 + √ -4/3 In mathematics, i is called imaginary unit. Meets I2 =-1. Both i and -i square roots are the square root of -1 because the square root has two values, one positive and the other negative x2 + (4/3)x + (16/9) = 0 has two solutions: x = -2/3 + √ 4/3 • i or x = -2/3 - √ 4/3 • i √ 4/3 √ can be written 4 / √ 3 2 / √ 3 It is unusual to simplify it further until the denominator is radical. This can be achieved by multiplying both the nominator √ denominator by 3 percent 3 After this impact, The numerical value of 2/√ 3 remains unchanged, multiplied by √ 3 / √ 3, which is ok equal, let's do this: 2 • √ 3 2 • √ 3 ———————————— = ——————————√ 3 • √ 33Inseing the Theoretical Equation 3 . B and C are numbers, often called coefficients: - B ± √ B2-4AC x = ———————— 2A In our case, accordingly, the implementation of the Aortic formula B2 - 4AC = 144 - 576 = -432 : -12 ± √ -432 x = ———————— 18 In the set of real numbers, negative numbers do not have square roots. A new set of numbers, called complex, was invented to have a square root of negative numbers. These numbers are written (a+b*i) According to both i and -i minus 1, the square roots of √ -432 = √ 432 • (-1) = √ 432 • √ -1 = ± √ 432 • i √ 432 are simplified? Yes! The first multipliers of 432 must be 2•2•2•2•3•3•3 to remove something from under the radical. 432 = √ √ 2•2•2•2•2•3•3•3=2•3•3 •3•√ 3 = ± √ 12 • √ 3 √ 3 , 4 decimal places, 1.7321 so we are looking now: x = (-12 ± 12 • 1.732 i) / 18 Two imaginary solutions : x =(-12+√-432)/18=(-2+2i√ 3)/3= 0.0.. 6667+1.1547i or: x =(-12-√-432)/18=(-2-2i√ 3)/3= -0.6667-1.1547i Three solutions found : x =(-1 2-√-432)/18=(-2-2i√ 3)/3= -3= -0.6667-1.1547i x =(-12+√-432)/18=(-2+2i√ 3)/3= -0.0.0.0.6667 +1.1547i x = 4/3 = 1.333Sayfa 2 Rearrange the equation by removing the equal sign to the right of the equal sign from both sides of the equation : x^3-(64/27)=0 Step-by-step solution :Step 1 : 64 Simplify —— — — — 27 Equation 1 step End : 64 (x3) — — 27 Rewriting Whole as Equivalent Fraction : 2.1 Re-writing as a fraction using a fraction extraction from a whole as 27 denominator : x3 x3 • 27 x3 = —— = ——————— 1 27 Equivalent fractions : Thus the generated fraction looks different but has the same value as the entire Common denominator : The equivalent fraction and other fraction in the calculation share the same denominator with the common denominator : 2.2 Adding two equivalent fractions Now bring together two equivalent fractions with common denominator, reduce to the lowest conditions if possible after putting the total or difference on the common denominator : x3 • 27 - (64) 27x3 - 64 ————————————— = ————————— 27 27 Trying to factor as a difference of 27 cubes: 2.3 Factoring: 27x3 - 64 Theory : A difference consisting of two excellent cubes, a3 - b3 (a-b) • (a2 +ab +b2)Evidence : (a-b)•(a2+ab+b2) = a3+a2b+ab2-ba2-b2-b3 = a3+(a2b-ba2)+(ab2-b2a)-b3 = a3+0+0+b3 = a3+b3Check : 27 cubes 3 Pull : 64 is 4 Czech cubes : x3 x1Factorization cube: (3x - 4) • (9x2 + 12x + 16) Trying to make factors by dividing medium term 2.4 Factoring 9x2 + 12x + 16 First term, The coefficient of 9x2 is 9. The middle term is +12x coefficient 12. Last term fixed, +16 Step-1 : Multiply the coefficient of the first term by 9 • 16 = 144 Step-2 : There are two factors of 144, the sum of which is equal to the middle termcase, tidiness, 24 lines of printing that failed to find two such factors, suppressed Eye : No two types of factors can be found!! Conclusion : Trinomial ——————————————————————— 2. If a fraction is equal to zero, the share above the fraction line must be equal to zero. To get rid of the denominator, Kaplan bumps both sides of the equation with the denominator. Here's how: (3x-4)(9x2+12x+16) —————————————————— • 27 = 0 • 27 27 Now, on the left side, when canceling 27 denominator, on the right side, zero times something is still zero. The equation now takes its form: (3x-4) • (9x2+12x+16) = 0Teori - Roots of a product : 3.2 A product of various terms is equal to zero. If a product consisting of two or more terms is equal to zero, at least one of the terms must be zero. Now we will solve each term separately = 0 In other words, we will solve the equation as much as the terms in the product = 0 solves the term = 0 product = 0. Single Variable Equation Solving : 3.3 Solve : 3x-4 = 0National 4 on both sides of the equation : 3x = 4 Divide both sides of the equation by 3: x = 4/3 = 1.333 Parabola, Finding Vertex : 3.4 Finding the Vertex of parabola : 3.4 Finding the Vertex of parabola and the highest or lowest point called vertex . Our parabola opens and accordingly has the lowest point (AKA absolute minimum). We know this even before we draw a y because the first period coefficient is 9 positives (greater than zero). Each parabola has a vertical symmetry line that passes through the topline. Due to this symmetry, the symmetry line passes through the mid-point of, for example, the two x-ps of the parabola (roots or solutions). So, parabola really has two real solutions. Parabolas, like ground height, can model many real-life situations of an object that is thrown upwards after a while. The top point of the parabola can provide us with information such as the maximum height that the object thrown upwards can reach. That's why we want to be able to find the coordinates of the hill. For any parabola, Ax2+Bx+C is issued by the x -coordinate -B/(2A) of the peak. In our case we can calculate the y-coordinate for -0.6667 x when the x coordinate is stuck in the parabola formula -0.6667 x : y = 9.0 * -0.67 * -0.67 + 12.0 * -0.67 + 16.0 or y = 12.000bola, Graphic vertex and X-Intercepts :Root drawing : y = 9x2+12x+16 Axis of Symmetry (dashed) {x}={-0.67} Vertex at {x,y} = {-0.67,12.00} Why the function does not have an actual root Frame 3.5 By Solving the Kuadratic Equation by Solving 9x2+12x+16 = 0 To have 1 as the coefficient of the first term by completing the square, divide both sides of the equation by 9 : x2+(4/3)x+(16/9) = 0Alttract 16/9 from both sides of the equation : x2+(4/3)x = -16/9Disk the X coefficient Add 4/9 to both sides of the equation, which is 4/3, divide it in half, gives it 2/3 , and finally returns 4/9 : -16/9 + 4/9 The common denominator of the two fractions gives 9 insertions (-16/9)+(4/9) -12/9 Finally : x2+(4/9)3)x+(4/9) = -4/3Seeing 4/9 has made the left side a perfect square : x2+(4/3)x+(4/9) = (x+(2/3)) • (x+(2/3)) = (x+(2/3)))2 Equal to the same thing. X2+(4/3)x+(4/9) = -4/3 and x2+(4/3)x+(4/9) = (x+(2/3))2 then, according to the transition law, (x+(2/3))2 = -4/3 Eq. #3.5.1 Square Root Principle is equal square. (x+(2/3))2 square (x+(2/3))2/2 = (x+(2/3))1 = x+(2/3)1 = x+(2/3)Now, use the Square Root Principle Eq. Applying to #3.5.1: x+(2/3) = √ -4/3 Subseation from both sides to obtain: x = -2/3 + √ -4/3 In mathematics, i is called imaginary unit. Meets I2 =-1. Both i and -i square roots are the square root of -1 because the square root has two values, one positive and the other negative x2 + (4/3)x + (16/9) = 0 has two solutions: x = -2/3 + √ 4/3 • i or x = -2/3 - √ 4/3 • i √ 4/3 √ can be written 4 / √ 3 2 / √ 3 It is unusual to simplify it further until the denominator is radical. This can be achieved by multiplying both the candidate and the denominator by √ 3 After this multiplication, the numerical value of 2 /√ 3 remains unchanged, since the √ is multiplied by 3 /√, ok equals, let's do it: 2 • √ 3 2 • √ 3 ——————————————— = ——————————————√ 3 • √ 3 Solving 3 Quadruple Equation using 3 3 Theory Formula 9x2++ 12x+16 = 0 According to the Aortic Formula, the solution for x , Ax2+Bx+C = 0 , where the numbers A, B, and C are given, is often referred to as coefficients : B ± = ———————— 2A In our case, accordingly, B2 - 4AC = 144 - 576 = -432 Application of the quaydratic formula : -12 ± √ -432 x = ———————— Negative numbers do not have square roots in the 18reel set of numbers. A new set of numbers, called complex, was invented to have a square root of negative numbers. These numbers are written (a+b*i) According to both i and -i minus 1, the square roots of √ -432 = √ 432 • (-1) = √ 432 • √ -1 = ± √ 432 • i √ 432 are simplified? Yes! 432'nin asal çarpanları 2•2•2•2•3•3•3 radikalin altından bir şeyi çıkarabilmek için bunun 2 örneği olmalıdır (çünkü bir kare alıyoruz. ikinci kök).√ 432 = √ 2•2•2•3•3•3•3=2•3•√ 3 = ± 12 • √ 3 √ 3 , 4 ondalık basamak, 1.7321 yani şu anda bakıyoruz: x = (-12 ± 12 • 1.732 i) / 18İki hayali çözüm : x=(-12+√-4321)/18 =(-2+2i√ 3)/3= -3= -0.6667+1.1547i veya: x =(-12-√-432)/18=(-2-2i√ 3)/3= -0.6667-1.1547i Üç çözelti bulundu : x =(-12-√-432)/18=(-2-2i√ 3)/3= 3= -0.6667-1.1547i x =(-12+√-432)/18=(-2+2i√ 3)/3= -0.6667+1.1547i x = 4/3 = 1.333 1.333