

Algebra 2 Name KEY ID: 1

Assignment Date _____ Period _____

Solve each equation by factoring.

1) $k^2 + 2k - 48 = 0$ $\frac{-2 \pm \sqrt{4+192}}{2}$
 $(k+8)(k-6) = 0$
 $k = -8, k = 6$

2) $p^2 + 13p + 42 = 0$ $\frac{-13 \pm \sqrt{169-168}}{2}$
 $(p+6)(p+7) = 0$
 $p = -6, p = -7$

3) $x^2 - 7x + 6 = 0$ $\frac{7 \pm \sqrt{49-24}}{2}$
 $(x-6)(x-1) = 0$
 $x = 6, 1$

4) $n^2 - 4n + 4 = 0$ $\frac{4 \pm \sqrt{16-16}}{2}$
 $(x-2)(x-2) = 0$
 $x = 2, x = 2$

5) $m^2 - 9m + 18 = 0$ $\frac{9 \pm \sqrt{81-72}}{2}$
 $(m-6)(m-3) = 0$
 $m = 6, m = 3$

6) $21r^2 - 47r + 20 = 0$ $\frac{47 \pm \sqrt{2209-1680}}{42}$
 $21r^2 - 35r + 12r + 20 = 0$
 $7r(3r-5) + 4(3r-5) = 0$
 $(7r+4)(3r-5) = 0$
 $7r+4=0 \quad 3r-5=0$
 $r = -\frac{4}{7}, r = \frac{5}{3}$

7) $21x^2 - 38x - 48 = 0$ $\frac{38 \pm \sqrt{1444+392}}{42}$
 $x = \frac{1}{3}, -\frac{16}{7}$

8) $n^2 - 8 = -2n$ $\frac{2 \pm \sqrt{4+32}}{2}$
 $n^2 + 2n - 8 = 0$
 $(n+4)(n-2) = 0$
 $n = -4, n = 2$

9) $b^2 + 8 = -6b$ $\frac{6 \pm \sqrt{36-32}}{2}$
 $b^2 + 6b + 8 = 0$
 $(b+2)(b+4) = 0$
 $b = -2, b = -4$

10) $v^2 = 35 - 2v$ $\frac{2 \pm \sqrt{4+140}}{2}$
 $v^2 + 2v - 35 = 0$
 $(v+7)(v-5) = 0$
 $v = -7, v = 5$

Solve each equation by taking square roots.

11) $6 + 81n^2 = 70$
 $81n^2 = 64$ $n = \pm \frac{8}{9}$
 $\sqrt{n^2} = \sqrt{\frac{64}{81}}$

12) $3 - 8a^2 = -125$
 $-8a^2 = -128$
 $a^2 = 16$
 $a = \pm 4$

13) $64x^2 - 4 = 60$
 $64x^2 = 64$
 $x^2 = 1$
 $x = \pm 1$

14) $7 - 2k^2 = -65$
 $-2k^2 = -72$
 $k^2 = 36$
 $k = \pm 6$

15) $4p^2 + 2 = 66$
 $4p^2 = 64$
 $p^2 = 16$
 $p = \pm 4$

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Solving Quadratic Equations By Factoring Worksheet Answer Key

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Solving Quadratic Equations By Factoring

Learn how to solve quadratic equations like $(x-1)(x+3)=0$ and how to use factorization to solve other forms of equations. Learn how to solve quadratic equations like $(x-1)(x+3)=0$ and how to use factorization to solve other forms of equations. If you're seeing this message, it means we're having trouble loading external resources on our website. If you're behind a web filter, please make sure ...

Solving quadratic equations by factoring (article) | Khan ...

Therefore, when solving quadratic equations by factoring, we must always have the equation in the form "(quadratic expression) equals (zero)" before we make any attempt to solve the quadratic equation by factoring. Returning to the exercise:

Solving Quadratic Equations by Factoring | Purplemath

Solving Quadratic Equations by Factoring. From the example above, the quadratic problem simply reduces to a linear problem which can be solved by simple factorization. Example 1: Given $x^2 + 5x + 6 = 0$ $\left(x + 3\right)\left(x + 2\right) = 0$ (factoring the polynomial) $\left(x + 3\right) = 0$ OR $\left(x + 2\right) = 0$. Thus $x = -3$, OR $x = -2$

Solve Quadratic Equations By Factoring Calculator

Solving a Quadratic Equation by Factoring. For the time being, we shall deal only with quadratic equations that can be factored (factorised). If you need a reminder on how to factor, go back to the section on: Factoring Trinomials. Using the fact that a product is zero if any of its factors is zero we follow these steps: (i) Bring all terms to the left and simplify, leaving zero on the right ...

1. Solving Quadratic Equations by Factoring

How to solve a quadratic equation by factoring: zero product property, examples and their solutions. Contents. Zero Product Property; Example 1; Example 2; Example 3; Example 4; Example 4: Another Solution; Related Pages; Zero Product Property. If a product of two factors is 0, then either one of the factor is 0. You're going to use this property to solve quadratic equations. Example 1: Solve ...

Solving a Quadratic Equation by Factoring

Solving Quadratic Equations by Factoring when Leading Coefficient is not 1 - Procedure (i) In a quadratic equation in the form $ax^2 + bx + c = 0$, if the leading coefficient is not 1, we have to multiply the coefficient of x^2 and the constant term. That is "ac". Then, decompose "ac" into two factors. (ii) The product of the two factors must be equal to "ac" and the addition of two factors must ...

Solving Quadratic Equations by Factoring Examples

Not all quadratic equations look the same as the example we just had. If you're going to solve a quadratic equation with this method, the first thing you need to do is make sure the equation is set equal to 0. You can't use the Zero Product Property if it's not set equal to 0. If your equation isn't set equal to 0, just move everything over to ...

Solving Quadratic Equations by Factoring - KATE'S MATH LESSONS

Linear-equation.com brings practical facts on Solving Quadratic Equations By Factoring Solver, intermediate algebra and basic concepts of mathematics and other math topics. In case you seek help on matrix algebra as well as description of mathematics, Linear-equation.com is the right site to head to!

Solving Quadratic Equations By Factoring Solver

Now if this is the first time that you've seen this type of what's essentially a quadratic equation, you might be tempted to try to solve for s using traditional algebraic means, but the best way to solve this, especially when it's explicitly equal to 0, is to factor the left-hand side, and then think about the fact that those binomials that you factor into, that they have to be equal to 0. So let's just do that. So how can we factor this? We've seen it in several ways. I'll show you the ...

Solving quadratics by factoring (video) | Khan Academy

Free quadratic equation calculator - Solve quadratic equations using factoring, complete the square and the quadratic formula step-by-step

Quadratic Equation Calculator - Symbolab

Solving Quadratic Equations by Factoring Date ____ Period ____ Solve each equation by factoring. 1) $(k + 1)(k - 5) = 0$ 2) $(a + 1)(a + 2) = 0$ 3) $(4k + 5)(k + 1) = 0$ 4) $(2m + 3)(4m + 3) = 0$ 5) $x^2 - 11x + 19 = -5$ 6) $n^2 + 7n + 15 = 5$ 7) $n^2 - 10n + 22 = -2$ 8) $n^2 + 3n - 12 = 6$ 9) $6n^2 - 18n - 18 = 6$ 10) $7r^2 - 14r = -7$ 11) P230 u1i2 5 CK Aaft QaT tSkotf 2tDwma7rzeB BL cL9Cz. P ...

Solving Quadratic Factoring - Kuta

With the quadratic equation in this form: Step 1: Find two numbers that multiply to give ac (in other words a times c), and add to give b . Example: $2x^2 + 7x + 3$. ac is $2 \times 3 = 6$ and b is 7. So we want two numbers that multiply together to make 6, and add up to 7. In fact 6 and 1 do that ($6 \times 1 = 6$, and $6 + 1 = 7$) How do we find 6 and 1? It helps to list the factors of $ac = 6$, and then try adding some ...

Factoring Quadratics - MATH

To solve the given quadratic equation by factoring, each factor has to be equated to zero and solved using the zero product property. To start, factor the equation and check.

Solve the following Quadratic Equation by Factorization: x ...

When you are clear with the basics of solving quadratic equation by factoring, then solving it will be the easiest one in algebraic mathematics. At the beginning stage, practice the problems with the step by step process, which I have explained above. After adequate practice, you will be able to solve any quadratic equation, in no time.

How to Solve Quadratic Equations By Factoring (Method And ...

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Solving Quadratic Equations by Factoring - Basic Examples ...

Simple Trick to Solve Quadratic Equations using the No Fuss Factoring Method. By PreMath.com

Solve Quadratic Equations By Factoring - Simple Trick No ...

This algebra video tutorial explains how to solve quadratic equations by factoring in addition to using the quadratic formula. This video contains plenty of ...

How To Solve Quadratic Equations By Factoring - Quick ...

This page will try to solve a quadratic equation by factoring it first. How does this work? Well, suppose you have a quadratic equation that can be factored, like $x^2 + 5x + 6 = 0$. This can be factored into $(x+2)(x+3) = 0$. So the solutions must be $x = -2$ and $x = -3$. Note that if your quadratic equation cannot be factored, then this method will not work.

Solve a Quadratic Equation by Factoring - WebMath

How to Solve Quadratic Equations using Factoring Method. This is the easiest method of solving a quadratic equation as long as the binomial or trinomial is easily factorable. Otherwise, we will need other methods such as completing the square or using the quadratic formula. The following diagram illustrates the main approach to solving a quadratic equation by factoring method. Main Idea of ...

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