

I'm not a robot!

Factor the trinomials and find one factor in the left column (how to color it) and one factor in the right column (which letter to color).

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | F | A | J | G | I | P | P | F | A | J | H | E | Q |
| K | H | D | M | L | A | E | F | H | B | P | L | A | E |
| J | B | V | S | W | C | G | H | B | Q | M | P | C | J |
| H | V | W | J | I | M | C | B | O | K | G | M | N | A |
| A | I | O | L | G | I | S | Q | K | H | D | W | K | H |
| L | G | E | O | C | J | I | F | G | B | X | F | G | D |
| M | C | A | I | R | L | H | J | D | X | K | A | D | Y |
| N | N | L | J | E | U | C | B | R | F | J | D | Z | R |
| O | O | N | C | H | E | U | Q | K | J | B | S | Y | X |
| N | V | O | V | C | A | I | F | A | D | P | O | R | Y |
| U | O | U | N | P | L | G | G | B | M | Y | N | S | X |
| R | T | S | T | Y | L | D | U | T | V | T | W | X | |

$$x^2 + 13x + 12$$

$$x^2 + 14x + 40$$

$$x^2 + 13x + 42$$

$$x^2 - 11x + 28$$

$$x^2 - 13x + 40$$

$$x^2 - 16x + 60$$

$$x^2 + x - 2$$

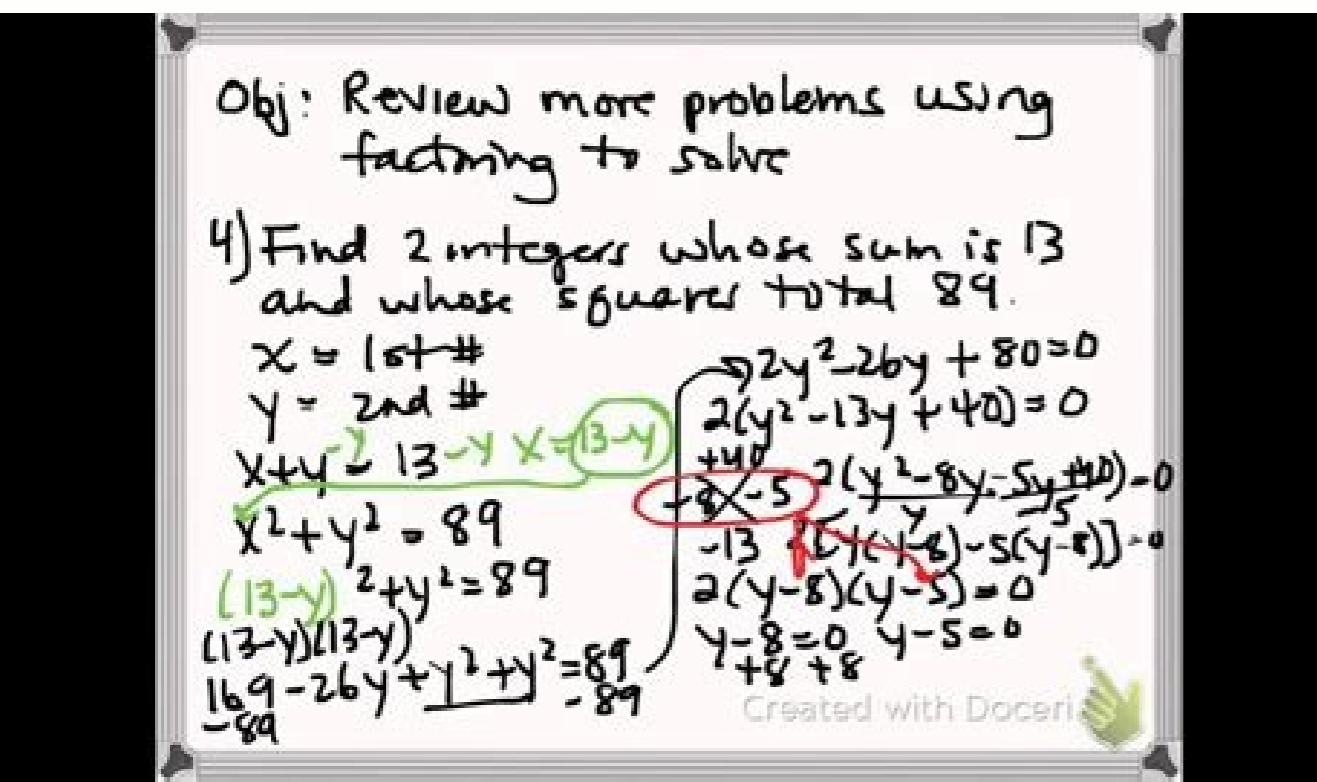
$$x^2 + x - 6$$

$$x^2 + 2x - 15$$

$$x^2 - 3x - 88$$

$$x^2 - 3x - 108$$

$$x^2 + 2x - 99$$



Name _____ Date _____

Quiz: Polynomial Word Problems

- 1 The sides of a triangle are represented by the expressions $3x^2 + 9$, $3x^2 - 4x$, and $5x + 7$. Write the simplest expression.
- 2 Shown gives Liza a 54 meter head start. After t seconds, Liza is a distance $6t + 54$ from the starting line and Shown is a distance of $7t$ from the starting line. How far ahead of Shown is Liza after t seconds?
- 3 A circular courtyard has an area of $8 - 4x^2$. There are two rectangular flowerbeds $4x^2$, $8x^2$ in the courtyard. Find the expression for the green lawn area.
- 4 Your school is ordering computer equipment. If c represent the cost of one personal computer and p is the cost of one printer. Write an expression for the total cost of 16 computers and 17 printers.
- 5 The sides of a triangle are represented by the expressions $5x^2 + 6$, $4x^2 - 9x$, and $7x + 6$. Write the simplest expression.
- 6 Anderson gives Fanny a 59 meter head start. After t seconds, Fanny is a distance $6t + 60$ from the starting line and Anderson is a distance of $7t$ from the starting line. How far ahead of Anderson is Fanny after t seconds?
- 7 A circular courtyard has an area of $6 - 4x^2$. There are two rectangular flower beds $4x^2, 9x^2$ in the courtyard. Find the expression for the green lawn area.
- 8 Your school is ordering computer equipment. If c represent the cost of one personal computer and p is the cost of one printer. Write an expression for the total cost of 18 computers and 19 printers.
- 9 The sides of a triangle are represented by the expressions $4x^2 + 8$, $2x^2 - 6x$, and $x + 2$. Write the simplest expression.
- 10 Fanny gives Ronny a 69 meter head start. After t seconds, Ronny is a distance $6t + 69$ from the starting line and Fanny is a distance of $7t$ from the starting line. How far ahead of Fanny is Ronny after t seconds?

| | | | | | | | | | | | |
|------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Circle # Correct | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Percentage Score | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |

One and Two Step Equation Word Problems Practice

Directions: Write an algebraic equation or expression AND correctly solve each problem.

*1) Lisa is cooking muffins. The recipe calls for 7 cups of sugar. She has already put in 2 cups. How many more cups does she need to put in?

5) Aliyah had \$24 to spend on seven pencils. After buying them she had \$10. How much did each pencil cost?

*2) A plumber charges \$50 to make a house call plus \$40 for each hour worked. How much does he charge if he works 5 hours?

6) You bought a magazine and four erasers at the store. The magazine cost \$5. You spent a total of \$25. How much did each eraser cost?

*3) Ms. Brady brought c cupcakes to school. She gave out one-half of the cupcakes in the morning. Then she gave out twelve more cupcakes in the afternoon. Which expression represents the number of cupcakes she had left at the end of the school day?

- a) $\frac{1}{2}(c - 12)$
b) $\frac{1}{2}c - 12$
c) $\frac{1}{2}(c + 12)$
d) $\frac{1}{2}c + 12$

7) Bob won 40 super bouncy balls playing horseshoes at her school's game night. Later, she gave two to each of her friends. She only has 8 remaining. How many friends does she have?

4) 331 students went on a field trip. Six buses were filled and 7 students traveled in cars. How many students were in each bus?

8) Imani spent half of her weekly allowance playing mini-golf. To earn more money her parents let her wash the car for \$4. What is her weekly allowance if she ended with \$12?

Keystone Algebra I

Date:

Greatest Common Factor and Least Common Multiple Word Problems

Determine whether the greatest common factor OR least common multiple would be used to answer each question. DO NOT SOLVE THE PROBLEM. Write "GCF" or "LCM" and state why you believe your choice is correct.

1. A fence is being constructed with posts that are 12cm wide. A second fence is being constructed with posts that are 15cm wide. If each fence is to be the same length, what is the shortest fence that can be constructed?

2. Stephanie can run one lap around a track in 4 minutes. Lisa can run one lap in 6 minutes. If they start running at the same time, how long will it be until they complete a lap together?

3. A fruit basket contains apples and oranges. Each basket will have the same quantity of apples, and the same quantity of oranges. If there are 10 apples and 15 oranges available, how many fruit baskets can be made? How many apples and oranges are in each basket?

4. There is a stack of rectangular tiles, with each tile having the length of 84cm and a width of 63cm. If some of these tiles are arranged into a square, what is the smallest side length the square can have?

5. A box of sugar cubes has a length of 156mm, a width of 104mm, and a height of 39mm. What is the edge length of one sugar cube? Assume the box is completely full and the manufacturer uses sugar cubes with the largest possible volume.

6. There are 8 toonies and 20 loonies scattered on a table. If these coins are organized into groups such that each group has the same quantity of toonies and the same quantity of loonies, what is the maximum number of groups that can be made? How many loonies and toonies are in each group?

Factoring polynomials word problems worksheet with answers. Factoring word problems worksheet pdf. Quadratic factoring word problems worksheet. Word problems involving factoring polynomials worksheet. Factoring polynomials word problems worksheet. Factoring word problems worksheet with answers. Solving quadratic equations by factoring word problems worksheet answers. Solving quadratic equations by factoring word problems worksheet.

We will learn how to solve Word Problems on quadratic equations by factoring.1. The product of two numbers is 12. If their sum added to the sum of their squares is 32, find the numbers.Solution:Let the numbers be x and y .As their product is 12, we get $xy = 12$ (i)According to the question, $x + y + x(\wedge 2) + y(\wedge 2) = 32$ (ii)From (i), $y = (\frac{1}{x})$ Putting $y = (\frac{1}{x})$ in (ii), we get $x + (\frac{1}{x}) + x(\wedge 2) + y(\wedge 2) = 32 \Rightarrow (x + (\frac{1}{x})) + (x + (\frac{1}{x}))(\wedge 2) = 32 \Rightarrow (x + (\frac{1}{x})) - 56 = 0$ Putting $x + (\frac{1}{x}) = t$, $t(\wedge 2) + t - 56 = 0 \Rightarrow t(\wedge 2) - 56 = 0 \Rightarrow t(t + 8) = 0 \Rightarrow t = 0$ or, $t - 7 = 0 \Rightarrow t = 7$ When $t = 0$, $x + y + x(\wedge 2) + y(\wedge 2) = 32 \Rightarrow x + y + 0 + 0 = 32 \Rightarrow x + y = 32$ When $t = 7$, $x + y + x(\wedge 2) + y(\wedge 2) = 32 \Rightarrow x + y + 49 + 49 = 32 \Rightarrow x + y = 32 - 98 \Rightarrow x + y = -64$ Therefore, the required two numbers are -6, -2 or 4, 3. An association has a fund of \$195. In addition that, each member of the association contributes the number of dollars equal to the number of members. The total money is divided equally among the members. If each of the members gets \$ 28, find the number of members in the association. Solution: Let the number of members be x . Total contributions from them = $x(\wedge 2)$ and the association has a fund of \$ 195. According to the problem, $x(\wedge 2) + 195 = 28x \Rightarrow x(\wedge 2) - 28x + 195 = 0 \Rightarrow x(x - 15)(x + 13) = 0 \Rightarrow x = 15$ or $x = -13$ There are 15 or 13 members in the association. Note: Two answers are acceptable in this case. Quadratic EquationsIntroduction to Quadratic EquationsFormation of Quadratic Equation in One VariableSolving Quadratic EquationsGeneral Properties of Quadratic EquationsMethods of Solving Quadratic EquationsRoots of a Quadratic EquationExamine the Roots of a Quadratic EquationProblems on Quadratic EquationsQuadratic Equations by FactoringWord Problems Using Quadratic FormulaExamples on Quadratic EquationsWord Problems on Quadratic Equations by FactoringWorksheet on Formation of Quadratic Equation in One VariableWorksheet on Quadratic Equations on Nature of the Roots of a Quadratic EquationWorksheet on Word Problems on Quadratic Equations by FactoringSolving Quadratic Equations by Completing the SquareMore Lessons for Grade 9 Math Worksheets Quadratic Equations - Solving word problems using factoring of trinomials Question 1a: Find two consecutive integers that have a product of 42 Quadratic equations - Solving word problems using factoring of trinomials Question 1b: There are three consecutive integers. The product of the two larger integers is 30. Find the three integers. Show Video Lesson Quadratic Equations - Solving Word problems by Factoring Question 1c: A rectangular building is to be placed on a lot that measures 30 m by 40 m. The building must be placed in the lot so that the width of the lawn is the same on all four sides of the building. Local restrictions state that the building cannot occupy any more than 50% of the property. What are the dimensions of the largest building that can be built on the property? Show Video Lesson More Word Problems Using Quadratic Equations Example 1 Suppose the area of a rectangle is 114.4 m² and the length is 14 m longer than the width. Find the length and width of the rectangle. Show Video Lesson More Word Problems Using Quadratic Equations Example 2 A manufacturer develops a formula to determine the demand for its product depending on the price in dollars. The formula is $D = 2,000 + 100P - 6P^2$ where P is the price per unit, and D is the number of units in demand. At what price will the demand drop to 1000 units? Show Video Lesson More Word Problems Using Quadratic Equations Example 3 The length of a car's skid mark in feet as a function of the car's speed in miles per hour is given by $L(s) = 0.046s^2 - .199s + 0.264$ If the length of skid mark is 220 ft, find the speed in miles per hour the car was traveling. Show Video Lesson Try the free Mathway calculator and problem solver below to practice various math topics. Try the given examples, or type in your own problem and check your answer with the step-by-step explanations. We welcome your feedback, comments and questions about this site or page. Please submit your feedback or enquiries via our Feedback page.

