

# ALGEBRA PROOF EXAMPLES

These are half-page sized proofs for extra practice with Algebra Proofs. They are great as warm-up or review slips. These will help your students practice justifying their steps using **Substitution** and the **Transitive Property**. It helps to get them used to this method of combining two different equations or lines in a proof **before** introducing Geometry-based proofs with diagrams. The familiar Algebra equations will help your students adjust to proof-writing in smaller steps. If you like this structure, you may also want to check out [the full Proof Unit](#) that is available for sale in my store. It is filled with printables, practice, and even a presentation to guide you and your students through proofs starting at the very beginning.

The image shows several overlapping worksheets from a 'Two-Column Proofs: Full Unit' binder. The worksheets feature two-column tables for writing statements and justifications, along with geometric diagrams. One diagram shows two intersecting lines with angles labeled 1 through 6. Another shows a right angle divided into two parts. Handwritten notes in various colors (green, blue, orange) provide solutions and justifications for each problem. A 'MATH GIRAFFE' logo is visible in the top left corner of the worksheets. The word 'PROOFS' is written in large, bold, white letters at the bottom of the collage.

**Two-Column Proofs: Full Unit**

**PROOFS**

Click the image to  
get the full unit

**Given:**      $a + b = 2c$   
                  $b = c$

**Name:**

**Date:**

**Prove:**      $a = c$

	<i>Statement</i>	<i>Justification</i>
1		
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12		
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14		

**Given:**      $a + b = 2c$   
                  $b = c$

**Name:**

**Date:**

**Prove:**      $a = c$

	<i>Statement</i>	<i>Justification</i>
1		
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13		
14		

**Given:**  $a + b = 2c$   
 $b = c$

**Name:**

**Date:**

**Prove:**  $a = c$

	<i>Statement</i>	<i>Justification</i>
1	$a + b = 2c$	Given
2	$b = c$	Given
3	$a + c = 2c$	Substitution (1, 2)
4	$a = c$	Subtraction Prop. of Eq.
5		
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11		
12		
13		
14		

**Given:**  $a + b = 2c$   
 $b = c$

**Name:**

**Date:**

**Prove:**  $a = c$

	<i>Statement</i>	<i>Justification</i>
1	$a + b = 2c$	Given
2	$b = c$	Given
3	$a + c = 2c$	Substitution (1, 2)
4	$a = c$	Subtraction Prop. of Eq.
5		
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14		

**Given:**  $m + n = p$   
 $p = 3r$   
 $m = n$

**Name:**

**Date:**

**Prove:**  $3r = 2n$

	<i>Statement</i>	<i>Justification</i>
1		
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14		

**Given:**  $m + n = p$   
 $p = 3r$   
 $m = n$

**Name:**

**Date:**

**Prove:**  $3r = 2n$

	<i>Statement</i>	<i>Justification</i>
1		
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13		
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**Given:**  $m + n = p$   
 $p = 3r$   
 $m = n$

**Name:**

**Date:**

**Prove:**  $3r = 2n$

	<i>Statement</i>	<i>Justification</i>
1	$m + n = p$	Given
2	$p = 3r$	Given
3	$m = n$	Given
4	$m + n = 3r$	Transitive Prop. (1, 2)
5	$n + n = 3r$	Subst. (3, 4)
6	$2n = 3r$	(simplified line 5)
7	$3r = 2n$	Symmetric Prop. Of Eq.
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14		

**Given:**  $m + n = p$   
 $p = 3r$   
 $m = n$

**Name:**

**Date:**

**Prove:**  $3r = 2n$

	<i>Statement</i>	<i>Justification</i>
1	$m + n = p$	Given
2	$p = 3r$	Given
3	$m = n$	Given
4	$m + n = 3r$	Transitive Prop. (1, 2)
5	$n + n = 3r$	Subst. (3, 4)
6	$2n = 3r$	(simplified line 5)
7	$3r = 2n$	Symmetric Prop. Of Eq.
8		
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**Given:**  $2x = g$   
 $x = 2y$   
 $g = f$

**Name:**

**Date:**

**Prove:**  $4y = f$

	<i>Statement</i>	<i>Justification</i>
1		
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**Given:**  $2x = g$   
 $x = 2y$   
 $g = f$

**Name:**

**Date:**

**Prove:**  $4y = f$

	<i>Statement</i>	<i>Justification</i>
1		
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Given:  $2x = g$   
 $x = 2y$   
 $g = f$

Name:

Date:

Prove:  $4y = f$

	<i>Statement</i>	<i>Justification</i>
1	$2x = g$	Given
2	$x = 2y$	Given
3	$g = f$	Given
4	$2(2y) = g$	Substitution (1, 2)
5	$4y = g$	(simplified line 4)
6	$4y = f$	Substitution (3, 5)
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12		
13		
14		

Given:  $2x = g$   
 $x = 2y$   
 $g = f$

Name:

Date:

Prove:  $4y = f$

	<i>Statement</i>	<i>Justification</i>
1	$2x = g$	Given
2	$x = 2y$	Given
3	$g = f$	Given
4	$2(2y) = g$	Substitution (1, 2)
5	$4y = g$	(simplified line 4)
6	$4y = f$	Substitution (3, 5)
7		
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