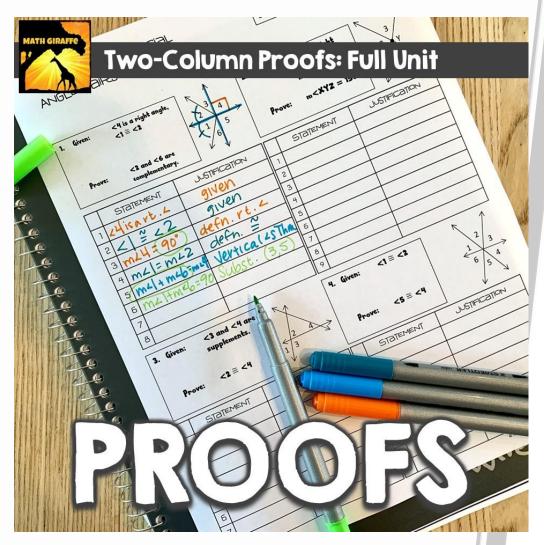# Algebra Proof Examples

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.

Two-Column Proofs: Full Unit

PROOFS

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

Name:

Date:

Prove: $a = c$

	Statement	Justification
1		
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Given: $a + b = 2c$
$b = c$

Name:

Date:

Prove: $a = c$

	Statement	Justification
1		
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14		

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

                               Date:

Prove: a = c

	Statement	Justification
1	a + b = 2c	Given
2	b = c	Given
3	a + c = 2c	Substitution (1, 3)
4	a = c	Subtraction Prop. of Eq.
5		
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Given: a + b = 2c   **Name:**
           b = c

                               Date:

Prove: a = c

	Statement	Justification
1	a + b = 2c	Given
2	b = c	Given
3	a + c = 2c	Substitution (1, 3)
4	a = c	Subtraction Prop. of Eq.
5		
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Given: m + n = p
p = 3r
m = n

Name:

Date:

Prove: 3r = 2n

	Statement	Justification
1		
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Given: m + n = p
p = 3r
m = n

Name:

Date:

Prove: 3r = 2n

	Statement	Justification
1		
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14		

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

Name:

Date:

Prove: $3r = 2n$

	Statement	Justification
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: $3r = 2n$

	Statement	Justification
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	Name:
		x = 2y	
		g = f	Date:
	Prove:	4y = f	

	Statement	Justification
1		
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	Given:	2x = g	Name:
		x = 2y	
		g = f	Date:
	Prove:	4y = f	

	Statement	Justification
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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14		

	Given:	2x = g	Name:
		x = 2y	
		g = f	Date:
	Prove:	4y = f	

	Statement	Justification
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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