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.

This extra file is available free on my blog at www.mathgiraffe.com and I came back to add it for you here for your convenience in case you have not yet grabbed it. Enjoy!

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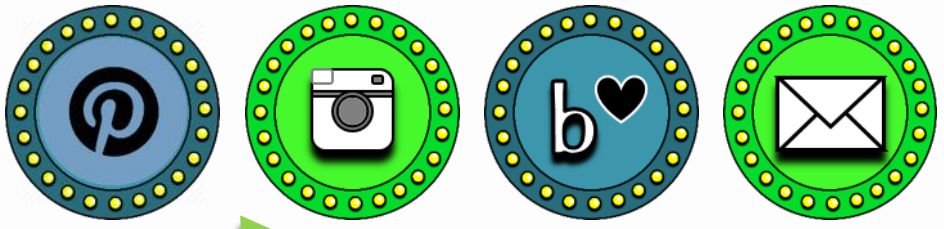

Connect with me

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

Name:

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

Name:

Date:

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

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

Name:

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	Statement	Justification
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Given:	$m + n = p$ $p = 3r$ $m = n$
Prove:	$3r = 2n$

Name:

Date:

	Statement	Justification
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Given:	$m + n = p$ $p = 3r$ $m = n$
Prove:	$3r = 2n$

Name:

Date:

	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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Given:	$m + n = p$ $p = 3r$ $m = n$
Prove:	$3r = 2n$

Name:

Date:

	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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Given:	$2x = g$ $x = 2y$ $g = f$
Prove:	$4y = f$

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	Statement	Justification
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Given:	$2x = g$ $x = 2y$ $g = f$
Prove:	$4y = f$

Name:

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	Statement	Justification
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Given:	$2x = g$ $x = 2y$ $g = f$
Prove:	$4y = f$

Name:

Date:

	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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Given:	$2x = g$ $x = 2y$ $g = f$
Prove:	$4y = f$

Name:

Date:

	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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