

Solving Equations with Proof Arguments

Conclusion	What was done	Justification
$3x - 7 = 14$	Given	Given
$3x - 7 + 7 = 14 + 7$	Add 7 to both sides	Addition Property of Equality
$3x + 0 = 21$	$-7 + 7 = 0$	Additive Inverse Property
$3x = 21$	$3x + 0 = 3x$	Additive Identity Property
$(\frac{1}{3})(3)x = (21)(\frac{1}{3})$	Multiply both sides by $(\frac{1}{3})$	Multiplication Property of Equality
$1x = 7$	$(\frac{1}{3})(3) = 1$	Multiplicative Inverse Property
$x = 7$	$1x = x$	Multiplicative Identity Property
$3(7) - 7 = 14$	Substituted 7 for x	Arithmetic

**Work with your partner to solve equations and justify your steps.
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