

HOMEWORK

WORKSHEET: Algebraic Proof

Name: _____

Solve each equation. Write a reason for every step.

1. $4x = 12x + 32$

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2. $28 + 12x = 8x - 4$

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3. $60x + 153 = 9x + 51$

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4. $-4x + 10 = -5x + 18$

--	--

5. $-3(x + 2) = 16 - x$

--	--

6. $-x - 2(9 - 8x) = 12$

--	--

7. $6(x - 6) = x(16 - 7)$

--	--

8. $\frac{1}{4}x + 10 = 2$

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WORKSHEET: Algebraic Proof

Name: Kelly

Solve each equation. Write a reason for every step.

1. $4x = 12x + 32$

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1. Given

2. $-8x = 32$

2. Subtraction

3. $x = -4$

3. Division

2. $28 + 12x = 8x - 4$

$28 + 12x = 8x - 4$

Given

$28 + 4x = -4$

subtraction

$4x = -32$

subtraction

$x = -8$

Division

3. $60x + 153 = 9x + 51$

$60x + 153 = 9x + 51$

given

$51x + 153 = 51$

subtraction

$51x = -102$

subtraction

$x = -2$

Division

4. $-4x + 10 = -5x + 18$

$-4x + 10 = -5x + 18$

Given

$x + 10 = 18$

Addition

$x = 8$

subtraction

5. $-3(x + 2) = 16 - x$

$-3(x + 2) = 16 - x$

Given

$-3x - 6 = 16 - x$

Distribution

$-3x = 22 - x$

Addition

$-2x = 22$

Addition

7. $6(x - 6) = x(16 - 7)$

$x = -11$

Division

6. $-x - 2(9 - 8x) = 12$

$-x - 2(9 - 8x) = 12$

Given

$-x - 18 + 16x = 12$

Distribution

$-18 + 15x = 12$

Simplify

$15x = 30$

Addition

$x = 2$

Division

8. $\frac{1}{4}x + 10 = 2$

$6(x - 6) = x(16 - 7)$

Given

$6x - 36 = 16x - 7x$

Distribute

$-36 = 10x - 7x$

subtraction

$-36 = 3x$

simplify

$x = -12$

Division

$\frac{1}{4}x + 10 = 2$

Given

$(4)\frac{1}{4}x = -8(4)$

subtraction

$x = -32$

Multiplication