

- 1) Bell Ringer: integers sprint *Hand in P.S. 12*
- 2) Turn in homework page 36
- 3) Lesson 6: Solving Equations by Moving Variables
- 4) Homework: page 33 - Show work on separate sheet of paper

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Subtracting Integers (B)
Use an integer strategy to find each answer.

$(-4) - (+8) = -12$	$(+6) - (+8) = -2$	$(-8) - (-1) = -7$
$(-5) - (+8) = -13$	$(-1) - (+8) = -9$	$(-2) - (+5) = -7$
$(-1) - (+6) = -7$	$(-1) - (-5) = +4$	$(-7) - (+3) = -10$

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p. 30

13) $2(x + 7) - 34 = 4x - 11x + 4(x - 1)$

$$\begin{aligned} 2x + 14 - 34 &= 4x - 11x + 4x - 4 \\ 2x - 20 &= -3x - 4 \\ \underline{+3x} & \\ 5x - 20 &= -4 \\ \underline{+20} & \\ 5x &= 16 \\ x &= \frac{16}{5} = 3\frac{1}{5} = 3.2 \end{aligned}$$

- 1) Distribute
- 2) combine like terms on same side
- 3) Move variables to same side
- 4) Add | Subtract
- 5) Divide | Multiply

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$$\begin{aligned} 2(x + 7) - 34 &= 4x - 11x + 4(x - 1) \\ 2(3\frac{1}{5} + 7) - 34 &= 4(3\frac{1}{5}) - 11(3\frac{1}{5}) + 4(2\frac{1}{5}) \\ 2(10\frac{1}{5}) - 34 &= 12\frac{4}{5} - 33\frac{11}{5} + 4(2\frac{1}{5}) \\ 20\frac{2}{5} - 34 &= \underline{12\frac{4}{5} - 35\frac{1}{5} + 8\frac{4}{5}} \\ \underline{-34\frac{2}{5}} & \\ 13\frac{3}{5} & \\ -13\frac{3}{5} &= 20\frac{8}{5} - 35\frac{1}{5} \\ -13\frac{3}{5} &= -13\frac{3}{5} \\ \underline{-21\frac{3}{5}} & \\ 13\frac{3}{5} & \end{aligned}$$

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Solving Linear Equations

Solve each equation.

$$\begin{array}{rcl} 6r+7 & = & 13+7r \\ -6r & & -6r \\ \hline 7 & = & 13+1r \\ -13 & & -13 \\ \hline -6 & = & 1r \end{array}$$

check $6r+7=13+7r$

$$\begin{array}{l} 6(-6)+7=13+7(-6) \\ -36+7=13-42 \\ -29=-29 \checkmark \end{array}$$

$$2) 13-4x=1-x$$

$$\begin{array}{rcl} 13-1 & = & 1+3x \\ \underline{-1} & & \underline{-1} \\ 12 & = & 3x \\ \frac{12}{3} & = & \frac{3x}{3} \\ 4 & = & x \end{array}$$

check $13-4x=1-x$

$$\begin{array}{l} 13-4(4)=1-4 \\ 13-16=-3 \\ -3=-3 \checkmark \end{array}$$

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3) $-7x-3x+2=-8x-8$

4) $-8-x=x-4x$

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Module 4 lesson 7 solving equations by moving variables, distributing, and combining like Terms.no

$$5) -14 + 6b + 7 - 2b = 1 + 5b$$

$$6) n + 2 = -14 - n$$

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$$7) n - 3n = 14 - 4n$$

$$8) 7a - 3 = 3 + 6a$$

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Module 4 lesson 7 solving equations by moving variables, distributing, and combining like Terms.no

~~$x + 5 + 2x = 2x + 6$~~

10) $-10 + x + 4 - 5 = 7x - 5$

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11) $-8n + 4(1 + 5n) = -6n - 14$

12) $-6n - 20 = -2n + 4(1 - 3n)$

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Module 4 lesson 7 solving equations by moving variables, distributing, and combining like terms.

$$13) 4n - 40 = 7(-2n + 2)$$

check

$$\begin{aligned} 7(5a - 4) - 1 &= 14 - 8a \\ 7(5 \cdot 1 - 4) - 1 &= 14 - 8(1) \\ 7(5 - 4) - 1 &= 14 - 8 \\ 7(1) - 1 &= 6 \\ 7 - 1 &= 6 \\ 6 &= 6 \checkmark \end{aligned}$$

$$14) \overbrace{7(5a - 4)}^{35a} - 1 = 14 - 8a$$

$$35a - 28 - 1 = 14 - 8a$$

$$\begin{aligned} 35a - 29 &= 14 - 8a \\ +8a &\quad \underline{+8a} \\ 43a - 29 &= 14 \\ +29 &\quad \underline{+29} \\ 43a &= 43 \\ \frac{43a}{43} &= \frac{43}{43} \\ a &= 1 \end{aligned}$$

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$$15) -31 - 4x = -5 - 5(1 + 5x)$$

$$16) 38 + 7k = 8(k + 4)$$

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Module 4 lesson 7 solving equations by moving variables, distributing, and combining like terms.

$$17) 8x + 4(4x - 3) = 4(6x + 4) - 4$$

$$18) 3(1 - 3x) = 2(-4x + 7)$$

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$$\cancel{19) 4(-8x + 5) = -32x - 26}$$

$$20) -3(x - 1) + 8(x - 3) = 6x + 7 - 5x$$

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