

## Warm Up

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$$10x - 16x$$

$$-6x$$

$$5w - 6 - 8 + 7w$$

$$12w - 14$$

$$12a - 8 + 4a + a$$

$$17a - 8$$

$$4x - 3(2x + 6)$$

$$4x - 6x - 18$$

$$-2x - 18$$

Homework

# According to Astronomers, What Is a "Light Year"?



Write the letter of each exercise in the box containing the answer.  
Answers for the top half of the page are in the top row of boxes.

<b>Evaluate for <math>a = 5, b = 2, c = 6</math>.</b>				<b>Evaluate for <math>w = 9, x = 10, y = 3</math>.</b>																																						
E. $8a$	G. $a + b + c$	E. $5(x + 2)$	H. $\frac{6x}{5y}$																																							
O. $12b$	I. $50 - c$	J. $(4w) + y$	T. $100 - (x + y)$																																							
T. $ab$	W. $7(a + c)$	M. $8(x + y)$	N. $x \cdot x$																																							
V. $4bc$	Y. $\frac{c}{b}$	S. $\frac{wx}{y}$	L. $\frac{w + x + y}{2}$																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25px; height: 20px; text-align: center;">12</td> <td style="width: 25px; height: 20px; text-align: center;">10</td> <td style="width: 25px; height: 20px; text-align: center;">96</td> <td style="width: 25px; height: 20px; text-align: center;">41</td> <td style="width: 25px; height: 20px; text-align: center;">70</td> <td style="width: 25px; height: 20px; text-align: center;">8</td> <td style="width: 25px; height: 20px; text-align: center;">77</td> <td style="width: 25px; height: 20px; text-align: center;">77</td> <td style="width: 25px; height: 20px; text-align: center;">40</td> <td style="width: 25px; height: 20px; text-align: center;">1</td> <td style="width: 25px; height: 20px; text-align: center;">48</td> <td style="width: 25px; height: 20px; text-align: center;">62</td> <td style="width: 25px; height: 20px; text-align: center;">17</td> <td style="width: 25px; height: 20px; text-align: center;">10</td> <td style="width: 25px; height: 20px; text-align: center;">24</td> <td style="width: 25px; height: 20px; text-align: center;">150</td> <td style="width: 25px; height: 20px; text-align: center;">7</td> </tr> <tr> <td style="text-align: center; font-size: 2em;">T</td> <td style="text-align: center; font-size: 2em;">H</td> <td style="text-align: center; font-size: 2em;">I</td> <td style="text-align: center; font-size: 2em;">S</td> <td style="text-align: center; font-size: 2em;">T</td> <td style="text-align: center; font-size: 2em;">W</td> <td style="text-align: center; font-size: 2em;">E</td> <td style="text-align: center; font-size: 2em;">L</td> <td style="text-align: center; font-size: 2em;">V</td> <td style="text-align: center; font-size: 2em;">E</td> <td style="text-align: center; font-size: 2em;">M</td> <td style="text-align: center; font-size: 2em;">O</td> <td style="text-align: center; font-size: 2em;">N</td> <td style="text-align: center; font-size: 2em;">T</td> <td style="text-align: center; font-size: 2em;">H</td> <td style="text-align: center; font-size: 2em;">S</td> <td style="text-align: center; font-size: 2em;">H</td> <td style="text-align: center; font-size: 2em;">S</td> </tr> </table>								12	10	96	41	70	8	77	77	40	1	48	62	17	10	24	150	7	T	H	I	S	T	W	E	L	V	E	M	O	N	T	H	S	H	S
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T	H	I	S	T	W	E	L	V	E	M	O	N	T	H	S	H	S																									
<b>Evaluate for <math>k = 2.5, m = 4, n = 12</math>.</b>				<b>Evaluate for <math>d = 10, u = 7, e = 3.2</math>.</b>																																						
G. $2km$	H. $\frac{m + n}{m}$	I. $de$	C. $9du$																																							
E. $n - (m + k)$	A. $3(m + n)$	W. $\frac{u \cdot u}{d}$	L. $d(e + 5)$																																							
I. $m \cdot m \cdot m$	S. $\frac{n \cdot n}{m}$	G. $\frac{500}{d \cdot d}$	R. $15(d - u)$																																							
O. $\frac{kn}{5}$	E. $\frac{150}{km}$	T. $u - e$	L. $\frac{ue}{eu}$																																							
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W	I	T	H	L	E	S	S	C	A	L	O	R	I	E	S	C	A																									

homework

Did You Hear About ...

1	2	3	4	5	6	7	8	9	10
The	unlucky	little	boy	who	tripped	on	the	up	escalator
and	spent	the	next	two	hours	falling	down	the	stairs
									?

Integers and Expressions: Simplifying Expressions

Answers 1 - 10

- $6n + 19$  LITTLE
- $-5x + 36$  UP
- $-8n + 19$  EXPLODED
- $2x - 6$  ON
- $10n + 14$  THE
- $-5x + 27$  RUNNING
- $-8n + 17$  WHO
- $8x - 6$  SIDEWALK
- $4n - 24$  UNLUCKY
- $5x - 4$  THE
- $-13x - 4$  WITH
- $-7n - 30$  BOY
- $8x - 19$  ESCALATOR
- $6n - 30$  CRACK
- $-13x + 36$  TRIPPED

Simplify the expression. Write the word next to the correct answer in the box that contains the exercise number.

- 1  $7(n + 2) + 3n$
- 2  $8(n - 3) - 4n$
- 3  $2(3n + 5) + 9$
- 4  $-5(n + 6) - 2n$
- 5  $-2(4n - 1) + 15$
- 6  $4(9 - 3x) - x$
- 7  $8x - 3(2 + 2x)$
- 8  $16 + 5(x - 4)$
- 9  $16 - 5(x - 4)$
- 10  $9 - 4(7 - 2x)$
- 11  $3d + 8(-d - 5)$
- 12  $-1 - 6(2 - 9d)$
- 13  $7d + 2(4d + 1) - 9$
- 14  $-3d + 3(2 - 8d) + 11$
- 15  $15d - 6(2d - 5) - 7$
- 16  $12 + 4(-3y - 1) - y$
- 17  $-20 - 2(8 - 5y) + 6y$
- 18  $-y + 15 - 3(10y + 3)$
- 19  $16 - 5y + 5(-8 - y)$
- 20  $-9y - 2(2 - 7y) + 4$

Answers 11 - 20

- $-31y + 6$  DOWN
- $16y + 6$  AFTERNOON
- $3d + 23$  TWO
- $-10y - 36$  DAYS
- $-5d - 40$  AND
- $-27d + 17$  NEXT
- $3d + 17$  BLOOD
- $-10y - 24$  THE
- $16y - 36$  FALLING
- $54d - 13$  SPENT
- $-27d - 13$  OUT
- $-13y + 8$  HOURS
- $5y$  STAIRS
- $15d - 7$  THE
- $5y + 6$  TRYING

3-12

PUNCHLINE - Bridge to Algebra - 2nd Ed.

$$9 \quad 16 - 5(x - 4)$$

$$16 - 5x + 20$$

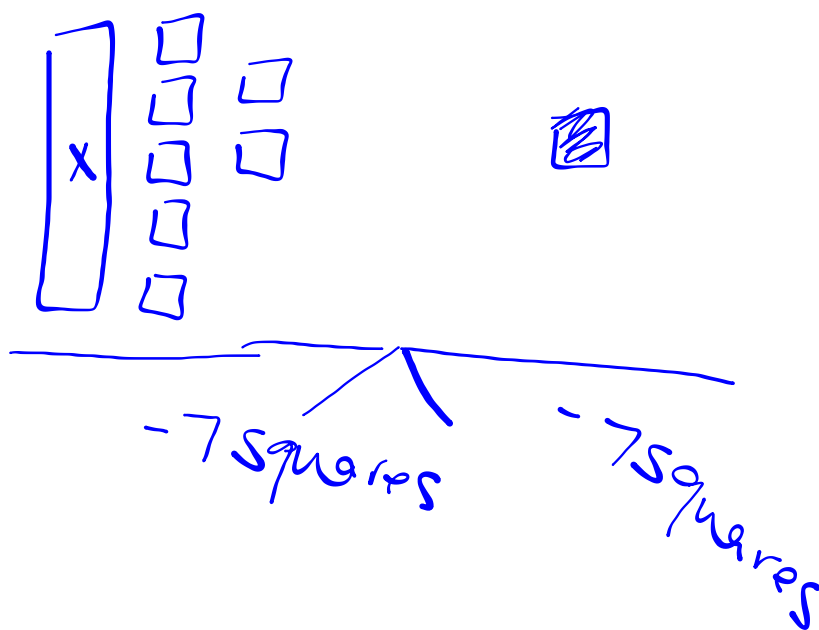
$$-5x + 36$$

$$14 - 3d + 3(2 - 8d) + 11$$

$$(-3d) + 6 + (-24d) + 11$$

$$-27 + 17$$

Name:		Date:	
Topic:		Class:	
Main Ideas/Questions	Notes/Examples		
ONE-STEP EQUATIONS	Steps to Solve:		
	①	Locate the constant term. Circle it.	
	②	Determine the operation tied to the constant.	
	③	Use <b>inverse operations</b> on both sides of the equal sign to solve.	
	④	Check your solution!	
INVERSE OPERATIONS	Inverse operations can be used to solve equations:		
	Addition	↔	Subtraction
	multiplication	↔	Division
SET I: Addition & Subtraction	Directions: Solve each equation. Check all solutions.		
	1. $x + 7 = -1$ $\frac{-7 \quad -7}{x + 0 = -8}$ $\sqrt{-8 + 7 = -1}$	$x = -8$	
	2. $m - 11 = -9$ $\frac{+11 \quad +11}{m + 0 = 2}$ $\sqrt{2 - 11 = -9}$		$m = 2$
	3. $9 = 14 + h$ $\frac{-14 \quad -14}{-5 = h}$	$14 + -5$ $\textcircled{9}$	
	4. $-15 + w = 14$ $\frac{+15 \quad +15}{w = 29}$		$-15 + 29$
	5. $-21 = k - 8$ $\frac{+8 \quad +8}{-13 = k}$		
6. $-1 = -4 + v$ $\frac{+4 \quad +4}{3 = v}$			
SET 2: Multiplication & Division	Directions: Solve each equation. Check all solutions.		
	7. $\frac{4a}{4} = \frac{-24}{4}$ Divide by the coefficient $1a = -6$ $\sqrt{4(-6) = -24}$	$a = -6$	
	8. $\frac{-56}{-7} = \frac{-7p}{-7}$ $8 = p$		



$5\left(\frac{n}{5}\right)$	$9\left(\frac{n}{5}\right)(9)5$ Multiply by denominator. $\cancel{9}n = 45$ $\checkmark \frac{45}{5} = 9$ $n = 45$ <span style="border: 1px solid black; padding: 2px;"><math>n = 45</math></span>	$10. 2\left(\frac{r}{-8}\right) - 8$ $-16 = \frac{-8r}{-8}$ $r = -16$
	<b>11.</b> $-k = 7$ $\frac{-1k}{-1} = \frac{7}{-1}$ $k = -7$	<b>12.</b> $\left(\frac{x}{-6}\right)(-12) - 6$ $x = 72$
<p align="center"><b>SET 3:</b> Mixed Practice</p>	<p><b>Directions:</b> Solve each equation. Check all solutions.</p>	
	<b>13.</b> $x - 11 = -3$	<b>14.</b> $-10d = 40$
	<b>15.</b> $a + 15 = 2$	<b>16.</b> $24 = -3 + h$
	<b>17.</b> $-4 = \frac{m}{-3}$	<b>18.</b> $9 = -y$
	<b>19.</b> $-47 + w = -10$	<b>20.</b> $\frac{p}{9} = -9$
	<b>21.</b> $-48 = -16a$	<b>22.</b> $k - 9 = -38$
	<b>23.</b> $-20 = \frac{v}{-4}$	<b>24.</b> $6n = 0$



- Quiz
- 1 Step equation
- IXL Practice 6th Grade

Lesson Z.3 (translating equations)

Z.4 (modeling equations)

Z.6 (solve one-step equations)

