Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples	
DISTRIBUTIVE PROPERTY	**Recall:** The distributive property states that $a(b+c) =$ ab + ac or $a(b-c) =$ ab - ac	
GUIDED EXAMPLES	1 $4(x+9)$ $4 \cdot x + 4 \cdot 9$ $4x + 36$	2 $7(k-3)$ $7 \cdot k - 7 \cdot 3$ $7k - 21$
	3 $-3(n-8)$ $-3n - 3 \cdot -8$ $-3n + 24$	4 $-2(5x-2)$ $-2 \cdot 5x - 2 \cdot -2$ $-10x + 4$

YOU TRY!

Directions: Simplify each expression by distributing.

1. $7(x+5)$ $7x+35$	**2.** $5(w-4)$ $5w-20$	**3.** $-5(m-5)$ $-5m+25$
4. $9(2-a)$ $18-9a$	**5.** $2(y+3)$ $2y+6$	**6.** $-2(x+7)$ $-2x-14$
7. $-7(3-5m)$ $-21+35m$	**8.** $3(2n+8)$ $6n+24$	**9.** $-12(c+4)$ $-12c-48$
10. $-2(4k+5)$ $-8k-10$	**11.** $-(k-2)$ $-k+2$	**12.** $4(1-7p)$ $4-28p$
13. $9(2r-7)$ $18r-63$	**14.** $-(5k+4)$ $-5k-4$	**15.** $\frac{4}{9}\left(\frac{3}{8}w+10\right)$ $\frac{1}{6}w+\frac{40}{9}$

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RIDDLE: Why didn't the quarter roll down the hill with the nickel?

Directions: Simplify each expression by either combining like terms of distributing. After completing each set, find matching answers. One will have a letter and the other a number. Write the letter in the matching numbered box at the bottom of the page.

SET 1			
H. $4(x+7)$	= 4x+28	**5.** $-3(x+9)$	= -3x-27
O. $4+7x-5x-6$	= 2x-2	**12.** $40-9x+4x+5$	= -5x+45
N. $-5(x-9)$	= -5x+45	**3.** $6x-2-2x+30$	= 4x+28
D. $9x-22-5-12x$	= -3x-27	**7.** $2(x-1)$	= 2x-2

SET 2			
A. $5n+14-11n-2$	= -6n+12	**8.** $13n-53-3n+3$	= 10n-50
E. $-4(n+8)$	= -4n-32	**4.** $-6(n-2)$	= -6n+12
C. $10-7n+12n+10$	= 5n+20	**2.** $-2(4n+5)$	= -8n-10
R. $10(n-5)$	= 10n-50	**10.** $5(n+4)$	= 5n+20
T. $-11-10n+2n+1$	= -8n-10	**11.** $3-12n+8n-35$	= -4n-32

SET 3			
S. $3(a+8)$	= 3a+24	**6.** $-4(3a+5)$	= -12a-20
M. $-2-17a+5a-18$	= -12a-20	**13.** $-7(a+2)$	= -7a-14
E. $-2(a-8)$	= -2a+16	**1.** $11a-8+11-5a$	= 6a+3
T. $3-17-9a+2a$	= -7a-14	**14.** $8a-5a+26-2$	= 3a+24
I. $3(2a+1)$	= 6a+3	**9.** $20-12a+10a-4$	= -2a+16

ANSWER:

1.	2.		3.	4.	5.		6.	7.	8.	9.		10.	11.	12.	13.	14.	
I	T		H	A	D		M	O	R	E		C	E	N	T	S	!

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Main Ideas/Questions	Notes/Examples	
Warm-Up	**Directions:** Simplify each expression by **combining like terms**.	
	1. $10x - 16x$ $-6x$	**2.** $12a - 8 + 4a + a$ $17a - 8$
	3. $5w - 6 - 8 + 7w$ $12w - 14$	**4.** $-7k + 17 - 2k - 3$ $-9k + 14$
	Directions: Simplify each expression by **distributing**.	
	5. $8(x + 5)$ $8x + 40$	**6.** $-4(2x - 9)$ $-8x + 36$
	7. $7(6 - x)$ $42 - 7x$	**8.** $-3(x + 1)$ $-3x - 3$
Simplifying Expressions	An algebraic expression is in **simplest form** when it has no like terms and no parenthesis. **To simplify an algebraic expression:** 1 Distribute → 2 Combine like terms	
Examples	**Directions:** Simplify each expression.	
	1. $3(x - 5) + 8x + 1$ $3x - 15 + 8x + 1$ $\boxed{11x - 14}$	**2.** $5(n + 6) - 21$ $5n + 30 - 21$ $\boxed{5n + 9}$
	3. $-7(w + 4) + 2w - 15$ $-7w - 28 + 2w - 15$ $\boxed{-5w - 43}$	**4.** $12(4 - k) - 9k$ $48 - 12k - 9k$ $\boxed{48 - 21k}$

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5. $6(r-2)-r+26-7r$

$6r-12-r+26-7r$

$\boxed{-2r+14}$

6. $-4(7m-1)-16+22m$

$-28m+4-16+22m$

$\boxed{-6m-12}$

7. $-13+5(y+2)-8$

$-13+5y+10-8$

$\boxed{5y-11}$

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

$12x-18+2x$

$\boxed{14x-18}$

9. $18-(7v+1)$

$18-7v-1$

$\boxed{-7v+17}$

10. $-2p-6(p-4)+22$

$-2p-6p+24+22$

$\boxed{-8p+46}$

11. $1-9(2n+3)-7n$

$1-18n-27-7n$

$\boxed{-25n-26}$

12. $2(a-4)+3(9-a)$

$2a-8+27-3a$

$\boxed{-a+19}$

13. $8(2k-7)-4(k+5)$

$16k-56-4k-20$

$\boxed{12k-76}$

14. $14y-(y-2)+5(y+9)$

$14y-y+2+5y+45$

$\boxed{18y+47}$

Summary: _____

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Name: _____ **Unit 2:** Algebraic Expressions

Date: _____ **Per:** _____ **Homework 3:** Distributive Property & Simplifying Expressions

Directions: Simplify each expression by distributing.

1. $3(m+9)$ $3m+27$	**2.** $8(x-2)$ $8x-16$	**3.** $-2(2k+9)$ $-4k-18$	**4.** $-15(v-4)$ $-15v+60$
5. $6(4-y)$ $24-6y$	**6.** $-(4k+11)$ $-4k-11$	**7.** $5(3r+1)$ $15r+5$	**8.** $-7(4-3p)$ $-28+21p$

Directions: Simplify each expression.

9. $2(x+9)-7x+4$ $2x+18-7x+4$ $\boxed{-5x+22}$	**10.** $-4(2k-1)+9k-15$ $-8k+4+9k-15$ $\boxed{k-11}$
11. $12(c-3)+27+c-9c$ $12c-36+27+c-9c$ $\boxed{4c-9}$	**12.** $-3(4w+5)-16-2w$ $-12w-15-16-2w$ $\boxed{-14w-31}$
13. $-10-3(7-p)$ $-10-21+3p$ $\boxed{-31+3p}$	**14.** $15n-(6n+8)+1$ $15n-6n-8+1$ $\boxed{9n-7}$
15. $-h-5(h+7)-29$ $-h-5h-35-29$ $\boxed{-6h-64}$	**16.** $24+4x-6(2x-5)$ $24+4x-12x+30$ $\boxed{-8x+54}$
17. $7(3-2k)+9(k-5)$ $21-14k+9k-45$ $\boxed{-5k-24}$	**18.** $1+3(r-8)-4(r+4)$ $1+3r-24-4r-16$ $\boxed{-r-39}$
19. $2(5-a)-6(2a+3)$ $10-2a-12a-18$ $\boxed{-14a-8}$	**20.** $-8(m+1)+5(3m-2)$ $-8m-8+15m-10$ $\boxed{7m-18}$

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