Name: KEY **Math 1**

Unit 1.1 Simplifying Expressions

Use the Distributive Property to simplify each expression.

1. $7(-5+m)$

$7(-5+m)$	Write the original problem
$7\cdot(-5)+7\cdot(m)$	Distribute
$-35+7m$	Simplify
$7m-35$	Rearrange terms from highest degree to lowest degree (Degree of terms is "highest is the variable with the largest exponent/s" "lowest is the constant term, (or the number without a variable).")

3. $15(3y-5)$

$15(3y-5)$	Write the original problem
$15\cdot(3y)+15\cdot(-5)$	Distribute
$45y-75$	Simplify
$45y-75$	Rearrange terms from highest degree to lowest degree (Degree of terms is "highest is the variable with the largest exponent/s" "lowest is the constant term, (or the number without a variable).")

5. $(2b-10)3.2$

$(2B-10)3.2$	Write the original problem
$(2B)\cdot 3.2+(-10)\cdot 3.2$	Distribute
$6.4B-32$	Simplify
$6.4B-32$	Rearrange terms from highest degree to lowest degree (Degree of terms is "highest is the variable with the largest exponent/s" "lowest is the constant term, (or the number without a variable).")

7. $1\left(-\frac{1}{2}r-\frac{5}{7}\right)$

$1\left(-\frac{1}{2}r-\frac{5}{7}\right)$	Write the original problem
$1\cdot\left(-\frac{1}{2}r\right)+1\cdot(-\frac{5}{7})$	Distribute
$-\frac{1}{2}r-\frac{5}{7}$	Simplify
$-\frac{1}{2}r-\frac{5}{7}$	Rearrange terms from highest degree to lowest degree (Degree of terms is "highest is the variable with the largest exponent/s" "lowest is the constant term, (or the number without a variable).")

9. $-(-8-6t)$

$-(-8-6t)$	Write the original problem
$-1\cdot(-8)-1\cdot(-6t)$	Distribute
$8+6t$	Simplify
$6t+8$	Rearrange terms from highest degree to lowest degree (Degree of terms is "highest is the variable with the largest exponent/s" "lowest is the constant term, (or the number without a variable).")

11. $-(5.8a+4.2b)$

$-(5.8a+4.2B)$	Write the original problem
$-1\cdot(5.8a)-1\cdot(4.2B)$	Distribute
$-5.8a-4.2B$	Simplify
$-5.8a-4.2B$	Rearrange terms from highest degree to lowest degree (Both terms are of the same degree so either can go first, in this case it usually goes in alphabetical order.)

Write each fraction as a sum or difference. Simplify fractions.

13. $\frac{14-6x}{19}$

$\frac{14-6x}{19}$	Write the original problem
$\frac{14}{19}-\frac{6x}{19}$	Go backwards through the steps of subtracting two fractions and combining them into one fraction

15. $\frac{15n-42}{14}$

$\frac{15n-42}{14}$	Write the original problem
$\frac{15n}{14}-\frac{42}{14}$	Go backwards through the steps of subtracting two fractions and combining them into one fraction
$\frac{15n}{14}-3$	Reduce

Simplify each expression by combining like terms.

17. $17y-15y$

$17y-15y$	Write the original problem
$2y$	Combine like terms

19. $8x+3-5x-9$

$8x+3-5x-9$	Write the original problem
$(8x-5x)+(3-9)$	Regroup like terms
$3x-6$	Combine like terms

21. $-17mn+4mn-mn+10mn$

$-17mn+4mn-mn+10mn$	Write the original problem
$(-17+4-1+10)mn$	Factor out like terms
$(-4)mn$	Simplify
$-4mn$	Multiply

23. $5(n-8)+6(7-2n)$

$5(n-8)+6(7-2n)$ Write the original problem

$5\cdot(n)+5\cdot(-8)+6\cdot(7)+6\cdot(-2n)$ Distribute

$5n-40+42-12n$ Simplify

$(5n-12n)+(-40+42)$ Regroup like terms

$-7n+2$ Combine like terms

Math 1 Unit 1.1 continued

Write a word phrase for each expression. Then simplify each expression.

25. $2(n+1)$ word phrase: _____

Two multiplied by the quantity of a number plus one.

Simplified expression:

$2(n+1)$ Write the original problem

$2\cdot(n)+2\cdot(1)$ Distribute

$2n+2$ Simplify

27. $\frac{1}{2}(4m-8)$ word phrase: _____

One half multiplied by the quantity of four times a number minus eight.

Simplified expression:

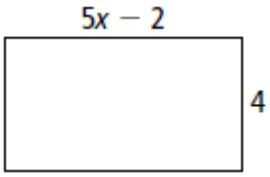
$\frac{1}{2}(4m-8)$ Write the original problem

$\frac{1}{2}\cdot(4m)+\frac{1}{2}\cdot(-8)$ Distribute

$2m-4$ Simplify

Geometry: Write an expression is simplified form for the area of each rectangle.

29.



Area of rectangle is Length times Width
The Length is: $5x - 2$
The Width is: 4

$L \cdot W$	Write the original problem
$(5x - 2) \cdot 4$	Replace variable with known values
$(5x) \cdot 4 + (-2) \cdot 4$	Distribute
$20x - 8$	Simplify

31. Reasoning: Demonstrate why $\frac{12x-6}{6} \neq 2x - 6$. Show your work.

$\frac{12x-6}{6}$ can by rewritten as $\frac{12x}{6} - \frac{6}{6}$. This reduces to $2x - 1$.