Name: KEY   **Math 1**

<div align="center">

Unit 1.1   **Simplifying Expressions**

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Use the Distributive Property to simplify each expression.

1. $7(-5 + m)$ $7m - 35$

2. $(5n + 3)12$ $60n + 36$

3. $15(3y - 5)$ $45y - 75$

4. $(7 + 6w)6$ $36w + 42$

5. $(2b - 10)3.2$ $6.4b - 32$

6. $4\left(\frac{1}{2}t - 5\right)$ $2t - 20$

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

8. $\frac{2}{3}\left(\frac{2}{3}m - \frac{2}{3}\right)$ $\frac{4}{9}m - \frac{4}{9}$

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

10. $-(-r + 1)$ $r - 1$

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

12. $-(f + 3g - 7)$ $-f - 3g + 7$

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

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

14. $\frac{9p - 6}{3}$ $3p - 2$

15. $\frac{15n - 42}{14}$ $\frac{15n}{14} - 3$

16. $\frac{81f + 63}{9}$ $9f + 7$

Simplify each expression by combining like terms.

17. $17y - 15y$ $2y$

18. $14n^2 - 7n^2$ $7n^2$

19. $8x + 3 - 5x - 9$ $3x - 6$

20. $-2(5ab - 6)$ $-10ab + 12$

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

22. $7m^2n + 4m^2n^2 - 4m^2n - 5m^3n^2 - 5mn^2$ $3m^2n + 4m^2n^2 - 5m^3n^2 - 5mn^2$

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

24. $z + \frac{2z}{5} - \frac{4z}{5}$ $\frac{3z}{5}$

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: $2n + 2$

26. $-5(x - 7)$ word phrase: _____

Negative five multiplied by the quantity of a number minus seven.

Simplified expression: $-5x + 35$

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

One half multiplied by the quantity of four times a number minus eight.
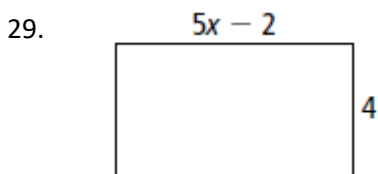
Simplified expression: $2m - 4$

28.   The tax a plumber must charge for a service call is given by the expression $0.06(35 + 25h)$ where h is the number of hours the job takes. Rewrite this expression using the Distributive Property. What is the tax for a 5 hour job and a 20 hour job?
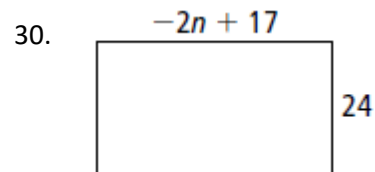
Rewrite this expression: $2.1 + 1.5h$

Tax for 5 hour job: $9.60   Tax for 20 hour job: $32.10

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

29.

5x − 2

4

$20x - 8$

30.

−2n + 17

24

$-48n + 408$

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 $2x - 1$.