School786
AN ONLINE SCHOOL

Name:                    Due Date:              Teacher:              Parent Sign:

1. Simplify: $3(x + 4)$.

2. Simplify: $5x + 2x$.

3. Combine like terms: $7a - 3a + 5$.

4. Use the distributive property to simplify: $4(2y - 3)$.

5. Factor out the greatest common factor: $12x + 8$.

6. Expand: $6(x + 2)$.

7. Simplify: $-3(2m - 5)$.

8. Combine like terms: $9 + 4b - 2b$.

9. Are the expressions $2(3x + 4)$ and $6x + 8$ equivalent? Explain.

10. Write two different expressions that are equivalent to $x + x + x$.

11. Simplify: $(\frac{1}{2})(8n + 6)$.

12. Factor completely: $15p + 10$.

13. Expand and simplify: $3(2x) + 3(5)$.

14. Is $x^2 + 2x$ equivalent to $x(x + 2)$? Explain.

15. Give an expression equivalent to 5 that includes the variable x (use x so that the expression equals 5 for any chosen x value? – instead, make: write an expression that is equivalent to 5 for any x by using 0x).

16. Simplify: $2(4t - 3) + 3t$.

17. Write an expression in x that equals 18 when $x = 6$.

18. If $x = 2$, are $4x + 1$ and $2(2x) + 1$ equivalent? Show your work.

19. Simplify: $10 - 3(2 + x)$.

20. Combine like terms: $5m + 3 - 2m - 7$.

Word problems – write an expression and give an equivalent form:

21. Sarah has x packs of stickers. Each pack has 7 stickers. Write an expression for the total number of stickers and an equivalent expression.

22. A rectangle has length $(3a + 2)$ meters and width 4 meters. Write an expression for the area and another equivalent expression.

23. Mike saves $5 each week for x weeks and then gets an extra $10. Write an expression for the total money and an equivalent factored form.

24. Lily's age is $p + 2$. Write an expression for twice Lily's age and an equivalent simplified expression.

25. A box contains $(2y + 4)$ candies. There are 3 such boxes. Write the total number of candies and an expanded equivalent.

26. A pencil costs c dollars. A student buys 4 pencils and gets a $2 discount. Write an expression for the total cost and an equivalent simplified expression.

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27. Jorge runs 2 laps. Each lap is (x + 1) miles. Write an expression for the total distance and an equivalent expanded form.

28. A number r is decreased by 9. Write an expression and another equivalent expression.

29. Emma has 4 quarters (25? each) and x dimes (10? each). Write an expression for her total cents and an equivalent expression combining like terms.

30. A recipe uses $\frac{1}{2}$ cup of sugar per batch. For n batches, write an expression for the sugar and an equivalent expression.

31. A theater has 6 seats per row and n rows, plus 12 seats in the front. Write an expression for total seats and an equivalent simplified expression.

32. A plant was 2 cm tall and grew 3 cm each day for d days. Write an expression for its height and an equivalent simplified form.

33. A set contains 6 red and 2 green marbles. If there are g identical sets, write an expression for the total number of marbles and a factored equivalent.

34. Two consecutive integers are n and n + 1. Write an expression for their sum and an equivalent simplified expression.

35. The price of a toy is t dollars, but it is on sale for half-price. Write an expression for the sale price and an equivalent simplified form.

More tasks and problems:

36. Expand and simplify: 5(2x - 1) + 2(x + 3).

37. Find a number k so that 4(x + 3) = kx + 12. What is k?