Name: _____ Date: _____

Lesson 7.4 Expanding and Factoring Algebraic Expressions

Expand each expression.

1. $3(4w + 5)$

   = _____

2. $5(6 - 3y)$

   = _____

3. $7(2a - 7)$

   = _____

4. $9(3p + 5)$

   = _____

5. $10(3 - 4d)$

   = _____

6. $8(5r + 3)$

   = _____

Factor each expression.

7. $7y + 21$

   = _____

8. $12 - 4k$

   = _____

9. $18 - 12h$

   = _____

10. $20w + 15$

    = _____

11. $14 - 8x$

    = _____

12. $24p - 15$

    = _____

State whether each pair of expressions are equivalent.

13. $8(3 - 5m)$ and $24 - 5m$

    NO

14. $9(2k + 3)$ and $18k + 27$

    _____

15. $5(3 + 5b)$ and $25b + 15$

    _____

16. $3(7z - 4)$ and $12 - 21z$

    _____

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Expand each expression. Then simplify the expression.

17. $3(3x + 7) + 4(5x - 2)$

= _____

18. $9(5k + 2) + 4(7 - 10k)$

= _____

19. $7(5 + 4w) + 6(8w - 3)$

= _____

20. $4(6 + 5g) + 7(3 - g)$

= _____

Simplify each expression. Then factor the expression.

21. $12p - 8 + 6p + 14$

= _____

22. $20 + 15x - 6 - 9x$

= _____

23. $9h + 30 + 12h - 2$

= _____

24. $20k + 7 - 2k + 8$

= _____

Solve.

25. Expand and simplify the expression
$3(y - 3) + 2(5 + 3y) + 24(2y - 5) + 6(5 - y)$.