

Check Your Understanding

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Example 1 Find each product.

1. $5w(-3w^2 + 2w - 4)$

3. $4km^2(8km^2 + 2k^2m + 5k)$

5. $2ab(7a^4b^2 + a^5b - 2a)$

2. $6g^2(3g^3 + 4g^2 + 10g - 1)$

4. $-3p^4r^3(2p^2r^4 - 6p^6r^3 - 5)$

6. $c^2d^3(5cd^7 - 3c^3d^2 - 4d^3)$

Example 2 Simplify each expression.

7. $t(4t^2 + 15t + 4) - 4(3t - 1)$

9. $-2d(d^3c^2 - 4dc^2 + 2d^2c) + c^2(dc^2 - 3d^4)$

10. $-5w^2(8w^2x - 11wx^2) + 6x(9wx^4 - 4w - 3x^2)$

8. $x(3x^2 + 4) + 2(7x - 3)$

Example 3 11. **GRIDDED RESPONSE** Marlene is buying a new plasma television. The height of the screen of the television is one half the width plus 5 inches. The width is 30 inches. Find the height of the screen in inches.

Example 4 Solve each equation.

12. $-6(11 - 2c) = 7(-2 - 2c)$

14. $-2(w + 1) + w = 7 - 4w$

16. $a(a + 3) + a(a - 6) + 35 = a(a - 5) + a(a + 7)$

17. $n(n - 4) + n(n + 8) = n(n - 13) + n(n + 1) + 16$

13. $t(2t + 3) + 20 = 2t(t - 3)$

15. $3(y - 2) + 2y = 4y + 14$

