

7-5 Skills Practice**Adding and Subtracting Polynomials**

Find each sum or difference.

1. $(2x + 3y) + (4x + 9y)$
2. $(6s + 5t) + (4t + 8s)$
3. $(5a + 9b) - (2a + 4b)$
4. $(11m - 7n) - (2m + 6n)$
5. $(m^2 - m) + (2m + m^2)$
6. $(x^2 - 3x) - (2x^2 + 5x)$
7. $(d^2 - d + 5) - (2d + 5)$
8. $(2h^2 - 5h) + (7h - 3h^2)$
9. $(5f + g - 2) + (-2f + 3)$
10. $(6k^2 + 2k + 9) + (4k^2 - 5k)$
11. $(x^2 - x + 1) - (3x - 1)$
12. $(b^2 + ab - 2) - (2b^2 + 2ab)$
13. $(7z^2 + 4 - z) - (-5 + 3z^2)$
14. $(5 + 4n + 2t) + (-6t - 8)$
15. $(4t^2 + 2) + (-4 + 2t)$
16. $(3g^3 + 7g) - (4g + 8g^3)$
17. $(2a^2 + 8a + 4) - (a^2 - 3)$
18. $(3x^2 - 7x + 5) - (-x^2 + 4x)$

7-6 Skills Practice**Multiplying a Polynomial by a Monomial**

Find each product.

1. $a(4a + 3)$
 2. $-c(11c + 4)$
 3. $x(2x - 5)$
 4. $2y(y - 4)$
 5. $-3n(n^2 + 2n)$
 6. $4h(3h - 5)$
 7. $3x(5x^2 - x + 4)$
 8. $7c(5 - 2c^2 + c^3)$
- Simplify each expression.**
9. $w(3w + 2) + 5w$
 10. $-p(2p - 8) - 5p$
 11. $2x(3x^2 + 4) - 3x^2$
 12. $f(5f - 3) - 2f$
 13. $w(3w + 2) + 5w$
 14. $y^2(-4y + 5) - 6y^2$
 15. $-p(2p - 8) - 5p$
 16. $4a(5a^2 - 4) + 9a$

Solve each equation.

17. $3(a + 2) + 5 = 2a + 4$
18. $3(a + 2) + 5 = 2a + 4$
19. $3(a + 2) + 5 = 2a + 4$
20. $3(a + 2) + 5 = 2a + 4$
21. $3(a + 2) + 5 = 2a + 4$
22. $2(4x + 2) - 8 = 4(x + 3)$
23. $5(y + 1) + 2 = 4(y + 2) - 6$
24. $4(b + 6) = 2(b + 5) + 2$

7-7 Skills Practice**Multiplying Polynomials**

Find each product.

1. $(m + 4)(n + 1)$

2. $(x + 2)(x + 2)$

3. $(b + 3)(b + 4)$

4. $(t + 4)(t - 3)$

5. $(r + 1)(r - 2)$

6. $(n - 5)(n + 1)$

7. $(3c + 1)(c - 2)$

8. $(2x - 6)(x + 3)$

9. $(d - 1)(5d - 4)$

10. $(2\ell + 5)(\ell - 4)$

11. $(3n - 7)(n + 3)$

12. $(q + 5)(5q - 1)$

13. $(3b + 3)(3b - 2)$

14. $(2m + 2)(3m - 3)$

7-8 Skills Practice**Special Products**

Find each product.

1. $(n + 3)^2$

2. $(x + 4)(x + 4)$

3. $(y - 7)^2$

4. $(t - 3)(t - 3)$

5. $(b + 1)(b - 1)$

6. $(a - 5)(a + 5)$

7. $(p - 4)^2$

8. $(z + 3)(z - 3)$

9. $(\ell + 2)(\ell + 2)$

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

11. $(3g + 2)(3g - 2)$

12. $(2m - 3)(2m + 3)$

13. $(6 + u)^2$

14. $(r + t)^2$

15. $(3q + 1)(3q - 1)$

16. $(c - d)^2$

17. $(2k - 2)^2$

18. $(w + 3h)^2$