NAME

Module 11 Simplifying Algebraic Expressions with Polynomials
Lesson 4 Multiplying Monomials and Binomials

additional practice

Find the product of each expression and simplify.

1. $(3m^2)(-6m^4)$
   $-18m^6$

2. $2a \cdot a^3$
   $2a^4$

3. $\left(-\frac{2}{5}x^3\right)(-10x)$
   $4x^4$

4. $(-5st^3)(-6s^3t)$
   $30s^4t^4$

5. $ab \cdot a^3b$
   a^4b^2

6. $x(x - 1)$
   $x^2 - x$

7. $2w(3w - 6)$
   $6w^2 - 12w$

8. $-5b^5(2b^2 - 3b)$
   $-10b^7 + 15b^6$

9. $x^2y(3xy - 4x^3y^2)$
   $3x^3y^2 - 4x^5y^3$

10. $-6m^3n^2(3mn^3 + 2m^2n^2)$
    $-18m^4n^5 - 12m^5n^4$

11. $4x^2y^2(6xy - 2x)$
    $24x^3y^3 - 8x^3y^2$

12. $-\frac{3}{4}s^2t^4(12 - 8st)$
    $-9s^2t^4 + 6s^3t^5$

13. $(b - 7)(b + 3)$
    $b^2 - 4b - 21$

14. $(t + 10)(t - 5)$
    $t^2 + 5t - 50$

15. $(q - 7)(q + 2)$
    $q^2 - 5q - 14$

16. $(x - 6)(x + 10)$
    $x^2 + 4x - 60$

17. $(x - 5)(x + 5)$
    $x^2 - 25$

18. $(r + 2)(r - 2)$
    $r^2 - 4$

19. $(k + 6)^2$
    $k^2 + 12k + 36$

20. $(r + 4)^2$
    $r^2 + 8r + 16$

21. $(w - 8)^2$
    $w^2 - 16w + 64$

22. $(b - 12)^2$
    $b^2 - 24b + 144$