EXTRA PRACTICE 20
Multiplication of Polynomials
Use after Section 4.2 **Name_____**

Examples: Multiply. $(4x^2)(2xy) = 8x^3y$

$$4x(3x-5) = 12x^2 - 20x$$

$$\begin{aligned}(5x+2)(x+3) &= 5x(x+3)+2(x+3)\\ &= 5x^2+15x+2x+6\\ &= 5x^2+17x+6\end{aligned}$$

$$\begin{aligned}(4x-3)(x^2+2x-1) &= 4x(x^2+2x-1)-3(x^2+2x-1)\\ &= 4x^3+8x^2-4x-3x^2-6x+3\\ &= 4x^3+5x^2-10x+3\end{aligned}$$

Multiply.

1. $(3x^2)(5x^3) =$ _____

2. $(4x^4)(-3x^2) =$ _____

3. $(8y^3)(-4y^5) =$ _____

4. $(2z)(-3z)(4z^5) =$ _____

5. $3x(4x-7) =$ _____

6. $5x(-2x+9) =$ _____

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

8. $-9x^2(3x^3+7x-2) =$ _____

9. $(x+3)(x+5) =$ _____

10. $(7x+6)(2x+3) =$ _____

EXTRA PRACTICE 20 (continued)
Multiplication of Polynomials
Use after Section 4.2

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11. $(5x+8)(2x+1) =$ _____

12. $(x-3)(x-5) =$ _____

13. $(3x-7)(x-1) =$ _____

14. $(6x-2)(7x-6) =$ _____

15. $(x^2-1)(x+3) =$ _____

16. $(2x+4)(x^2-8) =$ _____

17. $(x-5)(x^2+3x-4) =$ _____

18. $(x+2)(x^2-7x-2) =$ _____

19. $(x+4)(x^3-3x^2+4x-5) =$ _____

20. $(x^2+3x+7)(x^2-2x+4) =$ _____

21. x^2-6x+4
x^2+3x+2

22. x^2-8x+5
x^2-2x-3