NAME _____ DATE_____ PERIOD _____

8-1 Skills Practice

Monomials and Factoring

Find the factors of each number. Then classify each number as *prime* or *composite*.

1. 10

2. 31

3. 16

4. 52

5. 38

6. 105

Find the prime factorization of each integer.

7. -16

8. 20

9. 24

10. 36

11. 112

12. -72

Factor each monomial completely.

13. $10a^4$

14. $-27x^3y^2$

15. $28pq^2$

16. $44m^2ns^3$

Find the GCF of each set of monomials.

17. 12, 18

18. 20, 27

19. 30, 48

20. 24, 81

21. 20, 36, 64

22. 42, 60, 78

23. $16c$, $21b^2d$

24. $18a$, $48a^4$

25. $32xyz$, $48xy^4$

26. $12m^3n^2$, $44mn^3$

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8-2 Skills Practice

Factoring Using the Distributive Property

Factor each polynomial.

1. $7x + 49$

2. $8m - 6$

3. $5a^2 - 15$

4. $10q - 25q^2$

5. $8ax - 56a$

6. $81r + 48rs$

7. $t^2h + 3t$

8. $a^2b^2 + a$

9. $x + x^2y + x^3y^2$

10. $3p^2q^2 + 6pq + p$

11. $4a^2b^2 + 16ab + 12a$

12. $10m^3n^3 - 2mn^2 + 14mn$

13. $x^2 + 3x + x + 3$

14. $b^2 - 2b + 3b - 6$

15. $2s^2 + 2s + 3s + 3$

16. $2a^2 - 4a + a - 2$

17. $6t^2 - 4t - 3t + 2$

18. $9x^2 - 3xy + 6x - 2y$

Solve each equation. Check your solutions.

19. $x(x - 8) = 0$

20. $b(b + 12) = 0$

21. $(m - 3)(m + 5) = 0$

22. $(a - 9)(2a + 1) = 0$

23. $x^2 - 5x = 0$

24. $y^2 + 3y = 0$

25. $3a^2 = 6a$

26. $2x^2 = 3x$

Lesson 8-2