Extra Practice

Lesson 9-1

(pages 474–479)

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

1. 23 **1, 23; prime**
2. 21 **1, 3, 7, 21; composite**
3. 81 **1, 3, 9, 27, 81; composite**
4. 24 **1, 2, 3, 4, 6, 8, 12, 24; composite**
5. 18 **1, 2, 3, 6, 9, 18; composite**
6. 22 **1, 2, 11, 22; composite**

Find the prime factorization of each integer.

7. 42 $2 \cdot 3 \cdot 7$
8. 267 $3 \cdot 89$
9. -72 $-1 \cdot 2^3 \cdot 3^2$
10. 164 $2^2 \cdot 41$
11. -57 $-1 \cdot 3 \cdot 19$
12. -60 $-1 \cdot 2^2 \cdot 3 \cdot 5$

Factor each monomial completely. **13–18. See margin.**

13. $240mn$
14. $-64a^3b$
15. $-26xy^2$
16. $-231xy^2z$
17. $44rs^2t^3$
18. $-756m^2n^2$

Find the GCF of each set of monomials.

19. 16, 60 **4**
20. 15, 50 **5**
21. 45, 80 **5**
22. 29, 58 **29**
23. 55, 305 **5**
24. 126, 252 **126**
25. 128, 245 **1**
26. $7y^2$, $14y^2$ $7y^2$
27. $4xy$, $-6x$ $2x$
28. $35t^2$, $7t$ $7t$
29. $16pq^2$, $12p^2q$, $4pq$ $4pq$
30. 5, 15, 10 **5**
31. $12mn$, $10mn$, $15mn$ mn
32. $14xy$, $12y$, $20x$ **2**
33. $26jk^4$, $16jk^3$, $8j^2$ $2j$

13. $2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 5 \cdot m \cdot n$
14. $-1 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot a \cdot a \cdot a \cdot b$
15. $-1 \cdot 2 \cdot 13 \cdot x \cdot y \cdot y$
16. $-1 \cdot 3 \cdot 7 \cdot 11 \cdot x \cdot y \cdot y \cdot z$
17. $2 \cdot 2 \cdot 11 \cdot r \cdot s \cdot s \cdot t \cdot t \cdot t$
18. $-1 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 3 \cdot 7 \cdot m \cdot m \cdot n \cdot n$