Extra Practice

Lesson 11-2

(pages 594–598)

Simplify each expression. 4. $14\sqrt{7} - \sqrt{2}$ 10. $-6\sqrt{7} + 24\sqrt{5}$ 15. $69\sqrt{2} - 10\sqrt{3}$

1. $3\sqrt{11} + 6\sqrt{11} - 2\sqrt{11}$ $7\sqrt{11}$
2. $6\sqrt{13} + 7\sqrt{13}$ $13\sqrt{13}$
3. $2\sqrt{12} + 5\sqrt{3}$ $9\sqrt{3}$
4. $9\sqrt{7} - 4\sqrt{2} + 3\sqrt{2} + 5\sqrt{7}$
5. $3\sqrt{5} - 5\sqrt{3}$ in simplest form
6. $4\sqrt{8} - 3\sqrt{5}$ $8\sqrt{2} - 3\sqrt{5}$
7. $2\sqrt{27} - 4\sqrt{12}$ $-2\sqrt{3}$
8. $8\sqrt{32} + 4\sqrt{50}$ $52\sqrt{2}$
9. $\sqrt{45} + 6\sqrt{20}$ $15\sqrt{5}$
10. $2\sqrt{63} - 6\sqrt{28} + 8\sqrt{45}$
11. $14\sqrt{3t} + 8\sqrt{3t}$ $22\sqrt{3t}$
12. $7\sqrt{6x} - 12\sqrt{6x}$ $-5\sqrt{6x}$
13. $5\sqrt{7} - 3\sqrt{28}$ $-\sqrt{7}$
14. $7\sqrt{8} - \sqrt{18}$ $11\sqrt{2}$
15. $7\sqrt{98} + 5\sqrt{32} - 2\sqrt{75}$
16. $4\sqrt{6} + 3\sqrt{2} - 2\sqrt{5}$
17. $-3\sqrt{20} + 2\sqrt{45} - \sqrt{7}$ $-\sqrt{7}$
18. $4\sqrt{75} + 6\sqrt{27}$ $38\sqrt{3}$
19. $10\sqrt{\frac{1}{5}} - \sqrt{45} - 12\sqrt{\frac{5}{9}}$ $-5\sqrt{5}$
20. $\sqrt{15} - \sqrt{\frac{3}{5}}$ $\frac{4\sqrt{15}}{5}$
21. $3\sqrt{\frac{1}{3}} - 9\sqrt{\frac{1}{12}} + \sqrt{243}$ $\frac{17\sqrt{3}}{2}$

16. in simplest form

Find each product. 27. $4\sqrt{21} - 12\sqrt{35} + \sqrt{6} - 3\sqrt{10}$

22. $\sqrt{3}(\sqrt{5} + 2)$ $\sqrt{15} + 2\sqrt{3}$
23. $\sqrt{2}(\sqrt{2} + 3\sqrt{5})$ $2 + 3\sqrt{10}$
24. $(\sqrt{2} + 5)^2$ $27 + 10\sqrt{2}$
25. $(3 - \sqrt{7})(3 + \sqrt{7})$ 2
26. $(\sqrt{2} + \sqrt{3})(\sqrt{3} + \sqrt{2})$ $2\sqrt{6} + 5$
27. $(4\sqrt{7} + \sqrt{2})(\sqrt{3} - 3\sqrt{5})$