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MATH
HANDED OUT

Exercises [A]

Multiply. The radicand in the product should be as small as possible.

1. $\sqrt{6} \cdot \sqrt{6}$
2. $\sqrt{7} \cdot \sqrt{7}$
3. $\sqrt{6} \cdot \sqrt{2}$
4. $\sqrt{8} \cdot \sqrt{3}$
5. $\sqrt{7} \cdot \sqrt{14}$
6. $\sqrt{5} \cdot \sqrt{6}$
7. $\sqrt{3} \cdot \sqrt{3}$
8. $\sqrt{10} \cdot \sqrt{4}$
9. $\sqrt{3} \cdot \sqrt{27}$
10. $\sqrt{15} \cdot \sqrt{5}$
11. $\sqrt{2} \cdot \sqrt{18}$
12. $\sqrt{6} \cdot \sqrt{\frac{2}{3}}$
13. $\sqrt{\frac{2}{3}} \cdot \sqrt{\frac{3}{2}}$
14. $\sqrt{\frac{5}{7}} \cdot \sqrt{\frac{14}{5}}$
15. $\sqrt{18} \cdot \sqrt{32}$
16. $\sqrt{17} \cdot \sqrt{51}$
17. $\sqrt{5} \cdot \sqrt{\frac{3}{5}}$
18. $22 \cdot 2\sqrt{5}$
19. $30 \cdot 5\sqrt{7}$
20. $19 \cdot 2\sqrt{11}$
21. $\sqrt{a} \cdot \sqrt{a^2}$
22. $\sqrt{a^3} \cdot \sqrt{a^4}$
23. $\sqrt{2\,ab} \cdot \sqrt{3\,ab}$
24. $\sqrt{5\,a^2c} \cdot \sqrt{ac}$
25. $\sqrt{x^3} \cdot \sqrt{x^3}$
26. $\sqrt{b} \cdot \sqrt{2\,b}$
27. $\sqrt{45} \cdot \sqrt{80}$
28. $\sqrt{27} \cdot \sqrt{108}$
29. $\sqrt{10} \cdot \sqrt{125}$
30. $\sqrt{8} \cdot \sqrt{6} \cdot \sqrt{3}$
31. $\sqrt{14} \cdot \sqrt{7} \cdot \sqrt{21}$
32. $\sqrt{x} \cdot \sqrt{\frac{4\,a}{x}}$

33. $\sqrt{98\,x} \cdot \sqrt{\frac{1}{2}\,x}$
34. $\sqrt{\frac{10}{11}} \cdot \sqrt{\frac{22}{5}}$
35. $\sqrt{\frac{14}{27}} \cdot \sqrt{\frac{4}{21}}$
36. $\sqrt{\frac{96}{25}} \cdot \sqrt{\frac{125}{54}}$
37. $\sqrt{3\,b} \cdot \sqrt{6\,b} \cdot \sqrt{b}$
38. $4\sqrt{10} \cdot 5\sqrt{12}$
39. $3\sqrt{5} \cdot 2\sqrt{5}$
40. $7\sqrt{21} \cdot 3\sqrt{3}$
41. $20\sqrt{20} \cdot 5\sqrt{5}$
42. $6\sqrt{14} \cdot 2\sqrt{7}$
43. $8\,a\sqrt{5\,a} \cdot 3\sqrt{10\,a}$
44. $3\sqrt{6} \cdot 5\sqrt{5} \cdot 2\sqrt{15}$
45. $(5\sqrt{3})^2$
46. $(2\sqrt{6})^2$
47. $(2\sqrt{12})^2$
48. $(5\sqrt{3\,x})^2$
49. $5(\sqrt{3\,x})^2$
50. $6\sqrt{(3\,x)^2}$
51. $\sqrt{5(3\,x)} \cdot 5\sqrt{3\,x}$
52. $7(3\sqrt{7})^2$
53. $5\,x^2\sqrt{5\,x^2} \cdot 5\sqrt{x}$

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1. 6
2. 7
3. $2\sqrt{3}$
4. $2\sqrt{6}$
5. $7\sqrt{2}$
6. $\sqrt{30}$
7. 3
8. $2\sqrt{10}$
9. 9
10. $5\sqrt{3}$
11. 6
12. 2
13. 1
14. $\sqrt{2}$
15. 24
16. $17\sqrt{3}$
17. $\sqrt{3}$
18. $44\sqrt{5}$
19. $150\sqrt{7}$
20. $38\sqrt{11}$
21. $a\sqrt{a}$
22. $a^3\sqrt{a}$
23. $ab\sqrt{6}$
24. $ac\sqrt{5a}$
25. x^3
26. $b\sqrt{2}$
27. 60
28. 54
29. $25\sqrt{2}$
30. 12
31. $7\sqrt{42}$
32. $2\sqrt{a}$
33. $7x$
34. 2
35. $\frac{2\sqrt{2}}{9}$
36. $\frac{4\sqrt{5}}{3}$
37. $3b\sqrt{2b}$
38. $40\sqrt{30}$
39. 30
40. $63\sqrt{7}$
41. 1000
42. $84\sqrt{2}$
43. $120a^2\sqrt{2}$
44. $450\sqrt{2}$
45. 75
46. 24
47. 48
48. $75x$
49. $15x$
50. $18x$
51. $15x\sqrt{5}$
52. 441
53. $25x^3\sqrt{5x}$

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1. $2\sqrt{3}$
2. $4\sqrt{2}$
3. $2\sqrt{6}$
4. 6
5. $4\sqrt{3}$
6. $3\sqrt{6}$
7. $2\sqrt{17}$
8. $2\sqrt{19}$
9. $2\sqrt{21}$
10. $5\sqrt{10}$
11. $4\sqrt{a}$
12. $7\sqrt{2}$
13. $45\sqrt{2}$
14. $48\sqrt{2}$
15. $20\sqrt{2}$
16. $30\sqrt{2}$
17. $\sqrt{22}$
18. 14
19. $5m\sqrt{2mn}$
20. $15\sqrt{2}$
21. $\frac{2}{5}\sqrt{5}$
22. $2a\sqrt{2}$
23. $3m^2\sqrt{10m}$
24. $2ab\sqrt{30b}$
25. $\frac{4}{5}$
26. $\frac{1}{3}\sqrt{7}$
27. $\frac{1}{8}\sqrt{5}$
28. $2\sqrt{6}$
29. $4\sqrt{2}$