

$$10. \frac{\sqrt{98}}{\sqrt{49 \cdot 2}} = \frac{7\sqrt{2}}{7\sqrt{2}}$$

$$11. \frac{\sqrt{300}}{\sqrt{100 \cdot 3}} = 10\sqrt{3}$$

$$12. \frac{\sqrt{128x^3}}{\sqrt{64 \cdot 2 \cdot x^2 \cdot x}} = 8x\sqrt{2x}$$

$$13. \sqrt{17} \cdot \sqrt{17} = 17$$

$$14. \sqrt{112} \cdot \sqrt{63} = \sqrt{16 \cdot 7} \cdot \sqrt{9 \cdot 3} = 4\sqrt{7} \cdot 3\sqrt{3} = 12\sqrt{21}$$

$$15. \sqrt{11g} \cdot 5\sqrt{g} = 5\sqrt{11g^2} = 5g\sqrt{11}$$

$$16. 4m\sqrt{m} \cdot \sqrt{5m} = 4m\sqrt{5m^2} = 4m \cdot m\sqrt{5} = 4m^2\sqrt{5}$$

$$17. \frac{\sqrt{27x^5} \cdot \sqrt{48x}}{\sqrt{9 \cdot 3x^4 \cdot x} \cdot \sqrt{16 \cdot 3x}} = \frac{3x^2\sqrt{3x} \cdot 4\sqrt{3x}}{3x^2\sqrt{3x} \cdot 4\sqrt{3x}} = \frac{12x^2\sqrt{9x^2}}{12x^2 \cdot 3x} = 36x^3$$

$$18. \frac{\sqrt{19}}{\sqrt{49}} = \frac{\sqrt{19}}{7}$$

$$19. \frac{\sqrt{\frac{1}{6x^2}}}{\sqrt{6x^2}} = \frac{\frac{1}{\sqrt{6x^2}}}{\sqrt{6x^2}} = \frac{\sqrt{6}}{x\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}} = \frac{\sqrt{6}}{6x}$$

$$20. \frac{3 \cdot \frac{\sqrt{5}}{\sqrt{5}}}{\frac{\sqrt{5}}{\sqrt{5}}} = \frac{3\sqrt{5}}{\sqrt{25}} = \frac{3\sqrt{5}}{5}$$

$$21. \frac{\sqrt{7}}{\sqrt{8k}} = \frac{\sqrt{7}}{\sqrt{4 \cdot 2k}} = \frac{\sqrt{7}}{2\sqrt{2k}} \cdot \frac{\sqrt{2k}}{\sqrt{2k}} = \frac{\sqrt{14}}{2\sqrt{4k^2}} = \frac{\sqrt{14}}{2 \cdot 2k} = \frac{\sqrt{14}}{4k}$$

$$22. \frac{\sqrt{\frac{5}{27}}}{\sqrt{9 \cdot 3}} = \frac{\sqrt{5}}{3\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{15}}{3\sqrt{9}} = \frac{\sqrt{15}}{3 \cdot 3} = \frac{\sqrt{15}}{9}$$

$$23. 2\sqrt{3} + \sqrt{7} + \sqrt{3} = 3\sqrt{3} + \sqrt{7}$$

$$24. 2\sqrt{11} + \sqrt{99} = 2\sqrt{11} + \sqrt{9 \cdot 11} = 2\sqrt{11} + 3\sqrt{11} = 5\sqrt{11}$$

$$25. \sqrt{45} + 3\sqrt{20}$$

$$\sqrt{9 \cdot 5} + 3\sqrt{4 \cdot 5}$$

$$3\sqrt{5} + 3 \cdot 2\sqrt{5}$$

$$3\sqrt{5} + 6\sqrt{5}$$

$$\boxed{9\sqrt{5}}$$

$$26. \sqrt{3}(12 - \sqrt{15})$$

$$12\sqrt{3} - \sqrt{45}$$

$$12\sqrt{3} - \sqrt{9 \cdot 5}$$

$$\boxed{12\sqrt{3} - 3\sqrt{5}}$$

$$27. 3\sqrt{6}(4\sqrt{6} - \sqrt{600})$$

$$3\sqrt{6}(4\sqrt{6} - \sqrt{100 \cdot 6})$$

$$3\sqrt{6}(4\sqrt{6} - 10\sqrt{6})$$

$$3\sqrt{6}(-6\sqrt{6})$$

$$-18\sqrt{36}$$

$$-18 \cdot 6 = \boxed{-108}$$

$$28. (6 - \sqrt{7})(6 - \sqrt{7})$$

$$36 - 6\sqrt{7} - 6\sqrt{7} + \sqrt{49}$$

$$36 - 12\sqrt{7} + 7$$

$$\boxed{43 - 12\sqrt{7}}$$

$$29. (4 - \sqrt{13})(10 + \sqrt{13})$$

$$40 + 4\sqrt{13} - 10\sqrt{13} - \sqrt{169}$$

$$40 - 6\sqrt{13} - 13$$

$$\boxed{27 - 6\sqrt{13}}$$