

Radical Worksheet

Name Master

1. $\sqrt{256}$ 16

2. $\sqrt{50}$ $\sqrt{25 \cdot 2}$ $5\sqrt{2}$

3. $\sqrt{48}$ $\sqrt{16 \cdot 3}$ $4\sqrt{3}$

4. $\sqrt{\frac{2}{3}} \sqrt{\frac{3}{3}} = \sqrt{\frac{6}{3}}$ $\frac{\sqrt{6}}{3}$

5. $\sqrt{\frac{5}{8}} \cdot \sqrt{\frac{2}{2}} = \frac{\sqrt{10}}{\sqrt{16}}$ $\frac{\sqrt{10}}{4}$

6. $5\sqrt{2} + 3\sqrt{2}$ $8\sqrt{2}$

7. $\frac{\sqrt{48}}{\sqrt{12}} = \sqrt{4} = 2$

8. $\frac{15}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{15\sqrt{3}}{3} = 5\sqrt{3}$ $5\sqrt{3}$

9. $\frac{10\sqrt{6}}{\sqrt{2}}$ $10\sqrt{3}$

10. $2\sqrt{98}$ $\frac{2 \cdot 7 \cdot \sqrt{2}}{49 \cdot 2}$ $14\sqrt{2}$

11. $4\sqrt{3} - \sqrt{3}$ $3\sqrt{3}$

12. $\frac{\sqrt{27} + \sqrt{75}}{3\sqrt{3} + 5\sqrt{3}}$ $8\sqrt{3}$

13. $8\sqrt{5} + 9\sqrt{7}$ doesn't simplify

14. $\sqrt{\frac{25}{400}}$ $\frac{5}{20} = \frac{1}{4}$ $\frac{1}{4}$

15. $\frac{\sqrt{24} - 2\sqrt{6}}{46}$ $\frac{2\sqrt{6} - 2\sqrt{6}}{46} = 0$ 0

16. $9\sqrt{10} + 2\sqrt{10} - 11\sqrt{10}$ 0

17. $3\sqrt{3} \cdot \sqrt{2}$ $3\sqrt{6}$

18. $6\sqrt{2} \cdot 3\sqrt{7}$ $18\sqrt{14}$

19. $\frac{8\sqrt{45}}{16\sqrt{20}}$ $\frac{\sqrt{9 \cdot 5}}{2\sqrt{4 \cdot 5}}$ $\frac{3}{4}$

20. $4\sqrt{3} + \sqrt{12} - \sqrt{27}$
 $4\sqrt{3} + 2\sqrt{3} - 3\sqrt{3} = 3\sqrt{3}$ $3\sqrt{3}$

MULTIPLY:

1. $(\sqrt{3})(\sqrt{3})$ 3

2. $(2\sqrt{5})^2$ $4 \cdot 5$ 20

3. $(3\sqrt{6})(2\sqrt{3})$ $6\sqrt{18} = 6\sqrt{9 \cdot 2}$
 $6 \cdot 3\sqrt{2} = 18\sqrt{2}$ $18\sqrt{2}$

4. $(7\sqrt{3})^2$ $49 \cdot 3 = 147$ 147

5. $4\sqrt{3} \cdot 2\sqrt{5} \cdot 3\sqrt{3}$ $24 \cdot 3\sqrt{5}$
 $72\sqrt{5}$