Name: _____

Multiplying and Dividing Radicals

Directions: Simplify each of the following.

1.) $\sqrt{3} \times \sqrt{7} =$ _____

2.) $\sqrt{6} \times \sqrt{6} =$ _____

3.) $\sqrt{\frac{35}{5}} =$ _____

4.) $\sqrt{20} \times \sqrt{4} =$ _____

5.) $\sqrt{\frac{51}{3}} =$ _____

6.) $\sqrt{32} \times \sqrt{2} =$ _____

7.) $\frac{\sqrt{25}}{\sqrt{75}} =$ _____

8.) $\sqrt{12} \times \sqrt{10} =$ _____

9.) $\sqrt{4} \times \sqrt{20} =$ _____

10.) $\sqrt{19} \times \sqrt{3} =$ _____

11.) $\sqrt{\frac{110}{10}} =$ _____

12.) $\sqrt{\frac{45}{9}} =$ _____

13.) $\sqrt{24} \times \sqrt{21} =$ _____

14.) $\frac{\sqrt{8}}{4\sqrt{2}} =$ _____

15.) $\sqrt{3} \times \sqrt{33} =$ _____

16.) $\sqrt{18} \times \sqrt{16} =$ _____

ANSWER KEY

1.) $\sqrt{3} \times \sqrt{7} = \mathbf{\sqrt{21}}$

2.) $\sqrt{6} \times \sqrt{6} = \mathbf{\sqrt{36} = 6}$

3.) $\sqrt{\frac{35}{5}} = \mathbf{\sqrt{7}}$

4.) $\sqrt{20} \times \sqrt{4} = \mathbf{4\sqrt{5}}$

5.) $\sqrt{\frac{51}{3}} = \mathbf{\sqrt{17}}$

6.) $\sqrt{32} \times \sqrt{2} = \mathbf{\sqrt{64} = 8}$

7.) $\frac{\sqrt{25}}{\sqrt{75}} = \mathbf{\frac{5}{3\sqrt{3}}}$

8.) $\sqrt{12} \times \sqrt{10} = \mathbf{2\sqrt{30}}$

9.) $\sqrt{4} \times \sqrt{20} = \mathbf{4\sqrt{5}}$

10.) $\sqrt{19} \times \sqrt{3} = \mathbf{\sqrt{57}}$

11.) $\sqrt{\frac{110}{10}} = \mathbf{\sqrt{11}}$

12.) $\sqrt{\frac{45}{9}} = \mathbf{\frac{3\sqrt{5}}{3} = \sqrt{5}}$

13.) $\sqrt{24} \times \sqrt{21} = \mathbf{6\sqrt{14}}$

14.) $\frac{\sqrt{8}}{4\sqrt{2}} = \mathbf{\frac{2\sqrt{2}}{4\sqrt{2}} = \frac{1}{2\sqrt{2}}}$

15.) $\sqrt{3} \times \sqrt{33} = \mathbf{3\sqrt{11}}$

16.) $\sqrt{18} \times \sqrt{16} = \mathbf{12\sqrt{2}}$