Math on the Fly!

NAME: _____ DATE: _____

Multiplying and Dividing Radicals

Multiply and simplify each expression.

1. $3\sqrt{5} \cdot \sqrt{7}$

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

3. $-9\sqrt{3} \cdot \sqrt{6}$

4. $10\sqrt{12} \cdot -4$

5. $(2\sqrt{5})^2$

6. $2\sqrt{2} \cdot 3\sqrt{8}$

7. $5\sqrt{7} \cdot 6\sqrt{3}$

8. $3\sqrt{7} \cdot 4\sqrt{7}$

9. $-7\sqrt{6} \cdot -2\sqrt{2}$

10. $-\sqrt{10} \cdot 8\sqrt{5}$

Rationalize the denominator of each fraction below.

11. $\frac{3}{\sqrt{7}}$

12. $\frac{2}{\sqrt{6}}$

13. $\frac{5}{\sqrt{5}}$

14. $\frac{3\sqrt{2}}{\sqrt{3}}$

SOLUTIONS

1. $3\sqrt{35}$

2. $20\sqrt{3}$

3. $-9\sqrt{18} \rightarrow -27\sqrt{2}$

4. $-40\sqrt{12} \rightarrow -80\sqrt{3}$

5. $4\sqrt{25} \rightarrow 20$

6. $6\sqrt{16} \rightarrow 24$

7. $30\sqrt{21}$

8. $12\sqrt{49} \rightarrow 84$

9. $14\sqrt{12} \rightarrow 28\sqrt{3}$

10. $-8\sqrt{50} \rightarrow -40\sqrt{2}$

11. $\frac{3\sqrt{7}}{7}$

12. $\frac{2\sqrt{6}}{6} \rightarrow \frac{\sqrt{6}}{3}$

13. $\frac{5\sqrt{5}}{5} \rightarrow \sqrt{5}$

14. $\frac{3\sqrt{6}}{3} \rightarrow \sqrt{6}$