

Name: _____

Period: _____ Date: _____

Multiplying a Constant and a Radical **Answers**

Section I. Prime Factor Radicals in order to simplify

ie: $7\sqrt{50} = 7\sqrt{5 \cdot 5 \cdot 2} = 7 \cdot 5\sqrt{2} = 35\sqrt{2}$ ie: $-3\sqrt{12} = -3\sqrt{2 \cdot 2 \cdot 3} = -3 \cdot 2\sqrt{3} = -6\sqrt{3}$

1. $5\sqrt{28} = 5\sqrt{2 \cdot 2 \cdot 7} = 5 \cdot 2\sqrt{7} = 10\sqrt{7}$

2. $3\sqrt{27} = 3\sqrt{3 \cdot 3 \cdot 3} = 3 \cdot 3\sqrt{3} = 9\sqrt{3}$

3. $-7\sqrt{48} = -7\sqrt{2 \cdot 2 \cdot 2 \cdot 2 \cdot 3} = -7 \cdot 2 \cdot 2\sqrt{3} = -28\sqrt{3}$

4. $-10\sqrt{125} = -50\sqrt{5}$

5. $10\sqrt{12} = 20\sqrt{3}$

6. $8\sqrt{500} = 80\sqrt{5}$

7. $-4\sqrt{175} = -20\sqrt{7}$

8. $15\sqrt{245} = 105\sqrt{5}$

9. $20\sqrt{98} = 140\sqrt{2}$

10. $-2\sqrt{252} = -12\sqrt{7}$

11. $3\sqrt{108} = 18\sqrt{3}$