

Name: _____

Period: _____ Date: _____

Multiplying a Constant and a Radical

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. $5\sqrt{28} = 5\sqrt{\underline{\quad} \cdot \underline{\quad} \cdot \underline{\quad}} = 5 \cdot \underline{\quad}\sqrt{\underline{\quad}} = \underline{\quad}\sqrt{\underline{\quad}}$

2. $3\sqrt{27} = 3\sqrt{\underline{\quad} \cdot \underline{\quad} \cdot \underline{\quad}} = 3 \cdot \underline{\quad}\sqrt{\underline{\quad}} = \underline{\quad}\sqrt{\underline{\quad}}$

3. $-7\sqrt{48} = -7\sqrt{\underline{\quad} \cdot \underline{\quad} \cdot \underline{\quad}} = -7 \cdot \underline{\quad}\sqrt{\underline{\quad}} = -\underline{\quad}\sqrt{\underline{\quad}}$

4. $-10\sqrt{125}$ _____

5. $10\sqrt{12}$ _____

6. $8\sqrt{500}$ _____

7. $-4\sqrt{175}$ _____

8. $15\sqrt{245}$ _____

9. $20\sqrt{98}$ _____

10. $-2\sqrt{252}$ _____

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