

Name _____ Section _____ Due Date _____

Bridge to Unit 7 – Geometry LAB

List the perfect squares:

1^2 _____ 4^2 _____ 7^2 _____ 10^2 _____ 13^2 _____

2^2 _____ 5^2 _____ 8^2 _____ 11^2 _____ 14^2 _____

3^2 _____ 6^2 _____ 9^2 _____ 12^2 _____ 15^2 _____

Simplifying Square Root Radicals

If a square root radical is not a perfect square, such as $\sqrt{50}$, there is a way to simplify the radical.

Rule: $\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$ and $\sqrt{a} \cdot \sqrt{b} = \sqrt{a \cdot b}$ so $\sqrt{50} = \sqrt{25} \sqrt{2} = 5\sqrt{2}$

If a square root radical is not a perfect square, such as $3\sqrt{50}$, there is a way to simplify the radical.

Rule: $c\sqrt{a \cdot b} = c\sqrt{a} \cdot \sqrt{b}$ and $c\sqrt{a} \cdot \sqrt{b} = c\sqrt{a \cdot b}$ so
 $3\sqrt{8} = 3\sqrt{4} \sqrt{2} = 3 \cdot 2\sqrt{2} = 6\sqrt{2}$

Express in simplest radical form:

1. $\sqrt{12}$ 2. $\sqrt{48}$

3. $\sqrt{50}$ 4. $\sqrt{32}$

5. $7\sqrt{45}$ 6. $2\sqrt{90}$

Dividing Radicals (for this unit)

A. Simplify the radical expression

B. Cancel common factors in the numerator & denominator

Example: $8\sqrt{48} \div 4\sqrt{3} = \frac{8\sqrt{48}}{4\sqrt{3}} = 2\sqrt{\frac{48}{3}} = 2\sqrt{16} = 2 \cdot 4 = 8$

Or

$$8\sqrt{48} \div 4\sqrt{3} = \frac{8\sqrt{48}}{4\sqrt{3}} = \frac{8\sqrt{16}\sqrt{3}}{4\sqrt{3}} = \frac{8 \cdot 4\sqrt{3}}{4\sqrt{3}} = \frac{32\sqrt{3}}{4\sqrt{3}} = 8$$

7. $\frac{8\sqrt{2}}{40\sqrt{2}}$

8. $\frac{\sqrt{144}}{\sqrt{64}}$

9. $\sqrt{\frac{48}{3}}$

10. $\frac{\sqrt{72}}{\sqrt{2}}$

11. $\frac{\sqrt{40}}{\sqrt{90}}$

12. $\frac{\sqrt{18}}{\sqrt{81}}$