

Notes Simplifying Radicals with Fractions

Name: _____ Date: _____ Period: _____

Learning Target: _____

Three rules of simplifying radicals

1. No square or square factor under a radical
2. No fraction under a radical
3. No radical in a denominator

Example 1

Example 2

Example 3

Example 4

Example 5

Example 6

Where is it okay to leave radicals? _____

Where can we not have radicals? _____

Determine which (if any) rules are being broken by these radical expressions

1. $\frac{5}{\sqrt{6}}$

2. $\sqrt{\frac{3}{5}}$

3. $\frac{\sqrt{11}}{2}$

4. $\sqrt{200}$

5. $\frac{1}{\sqrt{14}}$

6. $\sqrt{41}$

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

Show me you can do it!

$$1. \sqrt{\frac{5}{18}}$$

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

$$3. \frac{2}{\sqrt{24}}$$

$$4. \frac{3}{\sqrt{36}}$$

$$5. \sqrt{\frac{8}{10}}$$

$$6. \sqrt{\frac{14}{5}}$$

Show me you understand it!

- ⊙ Explain which of these is correct and which is incorrect and why.

$$\frac{\sqrt{18}}{3} \quad \frac{\sqrt{3}}{4} \quad \frac{3}{\sqrt{4}}$$

- ⊙ What is incorrect about this problem?

$$\frac{3}{\sqrt{80}} = \frac{3}{\sqrt{4 \cdot 20}} = \frac{3}{2\sqrt{20}} = \frac{3\sqrt{20}}{2 \cdot 20} = \frac{3\sqrt{20}}{40}$$

- ⊙ Restate the three rules about radicals?

1. _____

2. _____

3. _____