Name_____ Date_____

- The idea is that you will __multiply__ the "fraction" by __"one"__ Remember:

- Identify the radical in the __denominator__. [Rationalize the denominator] $1 = \frac{1}{1} = \frac{4}{4} = \frac{\sqrt{3}}{\sqrt{3}}$

- Multiply the "fraction" by this __Radical__ over this same __Radical__ (itself).

- __Simplify__.

Examples:

1. $\frac{5}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \boxed{\dfrac{5\sqrt{3}}{3}}$

2. $\sqrt{\frac{12}{16}} = \frac{\sqrt{12}}{\sqrt{16}} = \frac{\sqrt{12}}{4} = \frac{2\sqrt{3}}{4}$ $\boxed{\dfrac{1\sqrt{3}}{2}}$

3. $\frac{\sqrt{5}}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}} = \boxed{\dfrac{\sqrt{35}}{7}}$

4. $\frac{\sqrt{3}}{2\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \boxed{\dfrac{\sqrt{15}}{10}}$ or $\boxed{\dfrac{\sqrt{3}}{2}}$

5. $\frac{2\sqrt{30}}{4\sqrt{6}} = \frac{2\sqrt{5}}{4}$

$\boxed{\dfrac{1\sqrt{5}}{2}}$ or $\boxed{\dfrac{\sqrt{5}}{2}}$

6. $\sqrt{\frac{9}{2}} * \sqrt{\frac{4}{5}} = \sqrt{\frac{36}{10}} = \frac{\sqrt{36}}{\sqrt{10}} = \frac{6}{\sqrt{10}} \cdot \frac{\sqrt{10}}{\sqrt{10}}$

$\frac{6\sqrt{10}}{10} = \boxed{\dfrac{3\sqrt{10}}{5}}$

7. A rectangle has an area of 120 units². If one side is $5\sqrt{2}$ units, what is the measure of the remaining side length?

$l \cdot w = A$

$\frac{5\sqrt{2}\,x}{5\sqrt{2}} = \frac{120}{5\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{120\sqrt{2}}{10} = \boxed{12\sqrt{2}}$

8. Solve for x: $\frac{5\sqrt{5} * x}{5\sqrt{5}} = \frac{2\sqrt{6}}{5\sqrt{5}}$

$x = \frac{2\sqrt{6}}{5\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \boxed{\dfrac{2\sqrt{30}}{25}} = x$