Bellwork  1/22/16

Name as many perfect squares as you can!

Section 8.1:
The Pythagorean Theorem

OBJ: Solve problems using P.T.
Review: Simplifying Radicals

Method 1
Prime factorization tree of the radicand (number under the radical)
Find pairs of numbers to “get out of jail”

Method 2
Using perfect squares that are factors of the radicand
Break into the products of the perfect square and other number
Multiplying Radicals

Remember: squaring undoes square rooting

\[ \sqrt{3}^2 = 3 \]

\[ (5\sqrt{6})^2 = \sqrt{15} \cdot \sqrt{15} = 25 \cdot 6 = 150 \]

\[ \frac{\sqrt{6} \cdot \sqrt{6}}{\sqrt{36} \cdot \sqrt{36}} = 6 \]

\[ 3\sqrt{3} \cdot 4\sqrt{3} = 12\sqrt{3} + 12 \cdot 3 = 36 \]

Adding Radicals

To add radical expressions, simplify each term so the number under the radical sign (radicand) is the same, then add the two terms together.

\[ \sqrt{3} + \sqrt{75} = \sqrt{25 \cdot 3} = 5\sqrt{3} \]

\[ \sqrt{3} + 5\sqrt{3} = 6\sqrt{3} \]
Adding Radicals Examples

\[ 3\sqrt{3} - \sqrt{3} \quad 3\sqrt{54} + 3\sqrt{24} \]