

# “Unwrapping” the Standards

1. Choose a course priority standard for the “unwrapping process”.
2. Skills: Circle the verbs – what *students* need to do.
3. Concepts: Underline nouns and noun phrases that represent *teachable concepts*.
4. Compose Big Idea statements

**Content Area: Math**

**Grade Level: 7<sup>th</sup>**

**Standard: 7.NS.3**

<p><b>Domain:</b> The Number System (NS)</p> <p><b>Cluster:</b> Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers</p> <p><b>Standard:</b> 7.NS.3 - Solve real-world and mathematical problems involving the four operations with rational numbers. (DOK 1,2)</p>		
1. Skills (verbs)	2. Key Concepts (nouns)	3. Additional Clarifications / Examples
Students need to be able to do.....	Students need to know.....	
Solve	real-world and mathematical problems involving the four operations with rational numbers.	<p>Footnote from the C.C. document associated to this standard:  <i>“Computations with rational numbers extend the rules for manipulating fractions to complex fractions.”</i> (by the end of 7<sup>th</sup> grade)</p> <p><u>Example:</u></p> <p>If students understand that <math>-8 \div 5</math> is the same as <math>\frac{-8}{5}</math>, they extend that understanding to <math>\frac{2}{3} \div \frac{-1}{2}</math> as <math>\frac{\frac{2}{3}}{\frac{-1}{2}}</math></p> <p><u>Examples:</u></p> <p><math>2 + -5</math>   <math>-4.5 + -2.5</math>   <math>-\frac{1}{2} + \frac{3}{4}</math>   <math>-6 * 5</math>   <math>-.25 * -10</math>   <math>24/-4</math></p>

		<p><u>Examples:</u> Jim's cell phone bill automatically deducts \$32 from his bank account every month. How much will the deductions total for the year?</p> <p>If it takes a submarine 20 seconds to drop to 100 feet below sea level from the surface. What was the rate of the descent?</p> <p>A newspaper reports these changes in the price of a stock over four days: <math>-1/8</math>, <math>-5/8</math>, <math>3/8</math>, <math>-9/8</math>. What is the average daily change?</p>
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**4. Big Idea(s) in student language:** Students will compute with rational numbers in real-world and mathematical problems.