#3

**Title:** solving linear equations of one variable  
**Subject/Course:** 9th Res. Math  
**Length:** 2 weeks

**Topic:** solve one step and multi step equations  
**Grade:** 9th  
**Designer:** K. Henderson

## UNIT GOALS AND EXPECTATIONS

### IMPORTANT CONCEPTS/UNDERSTANDINGS:
- combining like terms
- inverse operations
- use of the distributive property
- how to determine the least common multiple by factorization

### ESSENTIAL QUESTIONS:
- What is a coefficient?
- What is an equation?
- What is a solution?
- How do you use inverse operation?
- What does identity mean in math? [Identity for an operation or identity equation?]
- What is the distributive property?
- How do you find the least common multiple?

### STUDENT LEARNING EXPECTATIONS:

<table>
<thead>
<tr>
<th>Specific Declarative Knowledge – What I know</th>
<th>Specific Procedural Knowledge – What I need to do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vocabulary words</strong> – equation, solution, coefficient, inverse, multi step, identity, distributive, least common multiple.</td>
<td><strong>solve one step equation using add, subtract, multiply and divide using inverse operation and order of operations</strong></td>
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<tr>
<td></td>
<td><strong>determine if a number is a solution for an equation.</strong></td>
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<tr>
<td></td>
<td><strong>solve equations</strong></td>
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<tr>
<td></td>
<td><strong>involving fractions</strong></td>
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<td></td>
<td><strong>using distributive property</strong></td>
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<td></td>
<td><strong>that are identities [identity equations]</strong></td>
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<td></td>
<td><strong>that have no solution</strong></td>
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</tbody>
</table>

### UNIT ASSESSMENTS

(Include tasks related to Dimensions 3 and 4 and Bloom’s Taxonomy)

- open response question
  - requiring the student to use multi step equations (application)
### Traditional Assessments:
- independent practice worksheets
- Test
- warm-up or homework quizzes

### Other Evidence of Learning:
- notes
- guided practice
- observation
- marker board review

<table>
<thead>
<tr>
<th>ACTIVITIES AND LEARNING EXPERIENCES</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 4 step vocabulary to introduce key words from the unit.</td>
<td>4 step worksheet</td>
</tr>
<tr>
<td>2. Lesson 3.3 solve one step equations – use inverse operation “do the opposite”</td>
<td>Algebra's Cool DVD program Unit B</td>
</tr>
</tbody>
</table>
| 3. Lesson 3.4 and 3.5 – solve multi step equations  
* remind about cows and wolves fenced together.  
* Use the Disney song “I like to move it”  
* Checking your work.  
* There is not always an answer. | Algebra's Cool DVD program Unit B |
| 4. marker board review – group review | marker board & eraser    |

### Career Connections
- cashier, meteorologist, nurse, computer technician, statistical analyst