

PRE-ALGEBRA SCIP 3

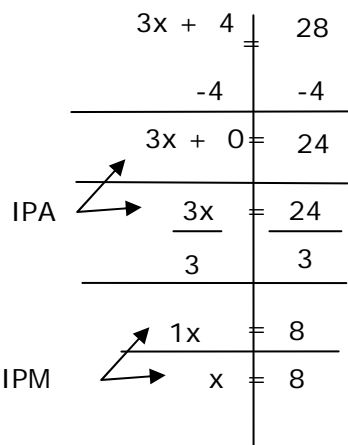
Properties of Numbers (AF 1.3\*)

Simplifying Variable Expressions (AF 1.3\*)

Teaching Strategies

We want to embed properties in other teaching strategies- simplifying expressions and solving 1-step & 2-step equations. This will provide consistent student exposure to number properties through out the year.

Future use of properties...



Example:

$5 * 63 * 2 = ?$  → CPM  
 $5 * 2 * 63 =$  → APM  
 $(5 * 2) * 63 =$   
 $10 * 63 = 630$

Steps:

- 1.) Identify signs: Prevents students from leaving out negatives and leverages use of CPA
- 2.) Get rid of parentheses- distributive
- 3.) Identify like terms- use CPA to get like terms together.
- 4.) Combine like terms.

Identify Properties as much as possible so students see them in context.

$4(2a - 3) + 5 - a$

$4(2a + (-3)) + 5 + (-a)$

$4(2a) + 4(-3) + 5 + (-a)$

$8a + (-12) + 5 + (-a)$

$8a + (-12) + 5 + (-a)$

Use CPA to rewrite:

$8a + (-a) + 5 + (-12)$

Use APA to rewrite:

$[8a + (-a)] + [5 + (-12)]$

Use IPM to re-write:

$[8a + (-1a)] + [5 + (-12)]$

Simplify:

$7a + (-7)$  or  $7a - 7$

Some ideas on teaching strategies. Not doctrine, just a place to start instructional discourse.

Resources that are relevant to this weeks new concepts.

Resources

PH 2-1 PH 2-2

Pg. 67 #'s 28-67 have students identify the property used to facilitate the "Mental Math". For distributive property, use example 1 and 2 for support.

PH 2-3

Problems 19-30: have students identify properties used during the simplifying process.

Topics and concepts that will support the grade level concepts being taught in the core class, as well a pre-teaching next weeks topic.

**PROGRAM SCIP STRATEGIC SUPPORT # 3**

Negatives (*, /, +, -) (NS 1.2*)	Distributive Property to do mental math (AF 1.3*)	True & False Statements Using Substitution (AF 1.3*) & (NS 5.1.2*)	
<b>Strategic Planning (Themes)</b>			
<p>Students struggle with the different rules for (-) numbers: (*, /) vs. (+, -)</p> <p>Have students do problem sets where they have to switch from (*, /) &amp; (+, -) from problem to problem</p> <p><b>Then</b></p> <p>Have students do problems w/o variables that requires them to switch from (*, /) &amp; (+, -) within the problem.</p>	<p>Use the distributive property to make expressions simpler:</p> <p><math>7 * 106 = 7 * (100 + 6)</math></p> <p><math>4 * 398 = 4 * (400 - 2)</math></p> <div data-bbox="758 545 1262 643" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p><b>Resources that you can use in the support class.</b></p> </div>	<p>Students will be solving 1-step equations next week. We want them to "check" their answers using substitution and determine whether statements are true or false:</p> <p>Eg. <math>5x + 3 = 23</math> for <math>x = 4</math> ?... True  <math>3x + 7 = 22</math> for <math>x = -5</math>?... False</p> <p>Establish equation has equal sign, expression has no equal sign.</p>	
<b>Resources</b>			
<p><b>PH</b> Pg 59 #'s 17-30 (*, /, +, -)</p> <p><b>SIK</b> Pre-Algebra Basics (brown book) skill sheet 12</p>	<p><b>PH</b> Pg. 70 Example 1 &amp; 2 Pg. 72 #'s 5-8</p> <p><b>SIK</b> Whole Numbers (yellow book) Skill sheet 18.</p>	<p><b>PH 1-3</b></p> <p>Pg. 15 #'s 11-26, Practice, Reteach. You need to modify and change each expression to an equation.</p>	
Performance Improvement Areas	Background Reading	CST/CAHSEE/Benchmark test items	
<p>The Data indicates that students are still struggling with subtracting negatives. Re-visit the SIK Pre-algebra basics (brown book) and section 1-6 in PH.</p>	<p>Content Overview of chapter 2 pg. 61A</p> <div data-bbox="758 992 1209 1198" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p><b>Test Prep: Identifying the release items for both the CST &amp; the CAHSEE that are relevant to this weeks topic. Available at <a href="http://www.cde.ca.gov">www.cde.ca.gov</a></b></p> </div>	<p><b>Q1 Final</b></p> <p><b>Q2 Final</b></p> <p><b>CST Release</b></p> <p><b>CAHSEE Release</b></p>	<p>21, 22, 23</p> <p>Leveraging: 64, 65, 66, 67, 68</p>
<div data-bbox="191 1154 699 1312" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p><b>Department wide performance on concepts that students still have opportunities at mastery.</b></p> </div>		<p>equations <b>PH</b> Pg. 61 #'s 16-29</p>	