Math Summer Learning Packet

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For questions and more information about this document, please contact the following:

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Admin Secretary, Cascadia Elementary
smmatthews1@seattleschools.org

The Math Summer Prep is for incoming Cascadia students or current students who want to bridge or maintain their math skills. At Cascadia, students are working two levels above grade level. For example, a student who has completed first grade and starts as a second-grade student at Cascadia will study fourth grade math. It provides a variety of printable materials, web based materials, and math skill building games.
Summer Math Guide Grade 2

What incoming 2nd grade Cascadia math students should know:

- Multiplication facts 1-10
- Adding/subtracting multi-digit number with regrouping (up to 4 digits)
- Understand place value up to 1,000,000
- Fraction basics
- Estimating and rounding whole numbers

Suggested Schedule: Do what works best for your family. While the printable packet and interactive websites do provide some feedback, having an adult there to further explain will help a lot!

**Potential 30 min. Schedule:**

5 min. -- warm up with a game*
5 min. -- watch a video to refine a skill
15 min. -- interactive website or packet work
5 min. -- use new skills to replay game

**Potential 15 min. Schedule:**

5 min – warm up with a game* or watch a video to refine a skill
10 min – interactive website or packet work
OR
Play a game for 15 minutes*

*If your student does not yet recall multiplication and division facts with fluency (10 – 15 second recall), please have them review their facts daily. The online flashcards at Mathigon have an excellent approach. See link under Interactive Websites for details.

Resources:

**Videos:** These short videos (~ 5min.) to help students “warm up” to math work.

**Games:** These are games that you can print out, obtain at a store, or access online. The Envision math curriculum has online games which are included here.

**Interactive Websites:** Links to iXL & Kahn Academy as well as Mathigon. Kahn Academy has a wonderful “Get Ready Series” for summer. Links are related to topics for that week. Use what appeals to your student – different websites have different approaches.

**Printable Packet:** Focused practice on the weekly topic to print and complete at home. The Envision math curriculum provides at home activities for families which are included here. Parent help is essential to help students complete the worksheets. Complete as much as needed to feel confident in the topic.

**Math Tool Kit:** A set of quick reference sheets students could use in the summer and during the school year.
**Week 1: Multiplication 2, 3, 4, 5, & 10 facts**

<table>
<thead>
<tr>
<th>Videos</th>
<th>Games</th>
<th>Interactive Websites</th>
<th>Printable Packet</th>
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<tbody>
<tr>
<td><strong>2 facts: double!</strong></td>
<td>Number Run: all operations through 10 <em>(app available through Apple App store &amp; Google Play)</em></td>
<td><strong>Multiplication by Heart flashcards</strong></td>
<td>Week 1 Printable Packet</td>
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<tr>
<td><strong>3 facts (fun!)</strong></td>
<td>Blockout (can be played with paper or online)</td>
<td><strong>IXL</strong>&lt;br&gt;Relate addition and multiplication for equal groups&lt;br&gt;Write multiplication sentences for arrays&lt;br&gt;Write multiplication sentences for number lines&lt;br&gt;Multiplication tables for 2, 3, and 4&lt;br&gt;Multiplication tables up to 5&lt;br&gt;Multiplication tables for 2, 3, 4, 5, and 10&lt;br&gt;Multiplication tables for 2, 3, 4, 5, and 10&lt;br&gt;Multiplication facts for 2, 3, 4, 5, and 10: true or false?&lt;br&gt;Multiplication facts for 2, 3, 4, 5, and 10: sorting&lt;br&gt;Multiplication facts for 2, 3, 4, 5, and 10: find the missing factor</td>
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<tr>
<td><strong>4 facts</strong></td>
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<td><strong>Kahn Academy</strong>&lt;br&gt;Get ready for multiplication (Get Ready for 4th Grade)&lt;br&gt;Basic Multiplication&lt;br&gt;Multiplication Tables for 2 - 9&lt;br&gt;Multiplication for 10, 11, &amp; 12&lt;br&gt;Get ready for division (Get Ready for 4th Grade)</td>
<td>Math Tool Kit&lt;br&gt;2nd Grade Math Tool Kit</td>
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## Week 2: Multiplication 6, 7, 8, & 9 facts

<table>
<thead>
<tr>
<th>Videos</th>
<th>Games</th>
<th>Interactive Websites</th>
<th>Printable Packet</th>
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<tr>
<td><strong>6 facts</strong></td>
<td>Number Run: all operations through 10 (app available through Apple App store &amp; Google Play)</td>
<td><strong>Multiplication by Heart flashcards</strong></td>
<td>Polypad Website guide</td>
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<tr>
<td><strong>6 facts (song!)</strong></td>
<td></td>
<td><strong>IXL</strong></td>
<td><strong>Week 2 Printable Packet</strong></td>
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<tr>
<td><strong>7 facts</strong></td>
<td>Blockout (can be played with paper or online)</td>
<td><strong>Multiplication tables for 6, 7, 8, and 9</strong></td>
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<tr>
<td><strong>7 skip count</strong></td>
<td></td>
<td><strong>Multiplication facts for 6, 7, 8, and 9: true or false?</strong></td>
<td>Math Tool Kit</td>
</tr>
<tr>
<td><strong>9 facts (90s themed!)</strong></td>
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<td><strong>Multiplication facts for 6, 7, 8, and 9: sorting</strong></td>
<td>2nd Grade Math Tool Kit</td>
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<td><strong>9 facts</strong></td>
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<td><strong>Multiplication facts for 6, 7, 8, and 9: find the missing factor</strong></td>
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<tr>
<td><strong>9 facts finger trick</strong></td>
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<td><strong>Kahn Academy</strong></td>
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<td></td>
<td><strong>Get ready for multiplication</strong></td>
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<td>(Get Ready for 4th Grade)</td>
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<td><strong>Basic Multiplication</strong></td>
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<td><strong>Multiplication Tables for 2 - 9</strong></td>
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<td><strong>Get ready for division</strong></td>
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<td>(Get Ready for 4th Grade)</td>
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### Week 3: Place value up to 1,000,000 and estimating & rounding

<table>
<thead>
<tr>
<th>Videos</th>
<th>Games</th>
<th>Interactive Website</th>
<th>Printable Packet</th>
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</thead>
<tbody>
<tr>
<td><strong>Finding value of a digit up to 100,000</strong></td>
<td><strong>Triple Digit Dare</strong> (printable game – see Polypad Website Guide for online game pieces)</td>
<td>Multiplication by Heart flashcards</td>
<td>Polypad Website guide</td>
</tr>
<tr>
<td><strong>Place value up to 1,000,000 (hundred thousands)</strong></td>
<td></td>
<td>IXL Place value - tens and ones</td>
<td>Week 3 Printable Packet</td>
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<tr>
<td></td>
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<td>Place value - up to hundreds</td>
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<td>Place value - up to thousands</td>
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<td>Convert between place values - ones, tens, and hundreds</td>
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<td>Convert from expanded form - up to hundreds</td>
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<td>Estimate to the nearest ten</td>
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<td><strong>Rounding Numbers to 100</strong></td>
<td>Round to the nearest ten</td>
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<td></td>
<td><strong>Rounding Numbers Song</strong></td>
<td>Round to the nearest ten or hundred</td>
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<td><strong>Rounding Numbers to the 10, 100, and 1000</strong></td>
<td>Place value models up to thousands</td>
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<td>Place value names up to thousands</td>
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<td>Place value names up to hundred thousands</td>
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<td></td>
<td><strong>Envision Game: Globbing Globs</strong> (log into student SPS account)</td>
<td>Value of a digit</td>
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<td>Round using a number line: nearest ten or hundred</td>
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<td>Rounding: nearest ten or hundred</td>
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<td>Rounding</td>
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<td>Rounding money amounts</td>
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<td>Rounding puzzles</td>
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<td>Estimate sums by rounding: up to 1,000</td>
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<td>Rounding up to the 1,000,000s place</td>
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<td><strong>Kahn Academy</strong> Intro to Place Value (Get ready for 4th grade)</td>
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<td>Ways to write whole numbers (words and expanded form)</td>
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<td>Rounding to nearest 10</td>
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<td>Rounding to nearest 100</td>
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</tbody>
</table>
**Week 4: Adding multidigit numbers with regrouping**

<table>
<thead>
<tr>
<th>Videos</th>
<th>Games</th>
<th>Interactive Website (will revisit week 7 – do what you can)</th>
<th>Printable Packet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2 Digit Addition with regrouping</strong></td>
<td><strong>Summit</strong> (printable game – see Polypad Website Guide for online game pieces)</td>
<td><strong>Multiplication by Heart flashcards</strong></td>
<td>Week 4 Printable Packet</td>
</tr>
</tbody>
</table>
| **Addition with regrouping Song**          | **Number Run**: all operations through 10 (app available through Apple App store & Google Play) | **IXL**  
**Add a two-digit and a one-digit number - without regrouping**  
**Add a two-digit and a one-digit number - with regrouping**  
**Use models to add two-digit numbers - without regrouping**  
**Use models to add two-digit numbers - with regrouping**  
**Add two-digit numbers without regrouping - sums to 100**  
**Add two-digit numbers with regrouping - sums to 100**  
**Add two-digit numbers - sums to 200**  
**Use models to add three-digit numbers - with regrouping**  
**Addition with three-digit numbers**  
**Add two numbers up to six digits**  
**Kahn Academy Strategies for Adding Two and Three – Digit Numbers**  
**Adding with Regrouping**                  | **Week 4 Printable Packet**                 |
| **Adding 3-Digit Numbers with regrouping** | **Leap Frog** (printable Game)              |                                                                                                 | **Math Tool Kit** |
| **Multidigit addition** (Math Antics)       | **Hoppers & Rush Hour Jr.**: physical game that helps students develop multi-step problem solving skills |                                                                                                 | **2nd Grade Math Tool Kit** |
| **Column Addition explained**               | **Smart Games** has many physical, classic logic games that also help with multi-step problem solving. **Try online here** |                                                                                                 |                   |
## Week 5: Subtracting multidigit numbers with regrouping

<table>
<thead>
<tr>
<th>Video</th>
<th>Games</th>
<th>Interactive Website (will revisit week 7 – do what you can)</th>
<th>Printable Packet</th>
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<tbody>
<tr>
<td><strong>Subtraction with regrouping song</strong></td>
<td><strong>Countdown</strong> (printable game – see Polypad Website Guide for online game pieces)</td>
<td><strong>Multiplication by Heart flashcards</strong></td>
<td><strong>Week 5 Printable Packet</strong></td>
</tr>
<tr>
<td><strong>3-Digit Subtraction with Regrouping</strong></td>
<td><strong>Number Run</strong>: all operations through 10 (app available through Apple App store &amp; Google Play)</td>
<td><strong>IXL</strong> Subtract two-digit numbers - with regrouping</td>
<td><strong>Math Tool Kit</strong></td>
</tr>
<tr>
<td><strong>Math-Antics: Multidigit Subtraction</strong></td>
<td><strong>Hoppers &amp; Rush Hour Jr.</strong>: physical game that helps students develop multi-step problem solving skills</td>
<td>Subtract multiples of 100</td>
<td><strong>2nd Grade Math Tool Kit</strong></td>
</tr>
<tr>
<td><strong>Subtracting multidigit numbers</strong></td>
<td><strong>Smart Games</strong> has many physical, classic logic games that also help with multi-step problem solving. Try online here.</td>
<td>Subtract multiples of 10 or 100</td>
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<tr>
<td><strong>Kahn Academy Subtracting multidigit numbers</strong></td>
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<td>Use models to subtract from three-digit numbers - without regrouping</td>
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<td></td>
<td>Use models to subtract from three-digit numbers - with regrouping</td>
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<td>Subtract across zeros</td>
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<td>Subtract three-digit numbers</td>
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<td>Subtract numbers up to three digits</td>
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<td>Subtract across zeros</td>
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<td>Subtract numbers with four or more digits</td>
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<td><strong>Kahn Academy</strong> Strategies for Subtracting Two and Three Digit Numbers</td>
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<td>Subtracting with Regrouping</td>
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</tbody>
</table>
### Week 6: Review multiplication facts 0 - 10

<table>
<thead>
<tr>
<th>Video <em>Week 1 &amp; 2 videos</em></th>
<th>Games</th>
<th>Interactive Websites</th>
<th>Printable Packet</th>
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</thead>
<tbody>
<tr>
<td><strong>Multiply by 0 &amp; 1</strong></td>
<td>Number Run: all operations through 10 (app available through Apple App store &amp; Google Play)</td>
<td><strong>Multiplication by Heart flashcards</strong></td>
<td><strong>Week 6 Printable Packet</strong></td>
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<tr>
<td><strong>7 skip count</strong></td>
<td>Blockout (can be played with paper or online)</td>
<td><strong>IXL</strong> Multiply by 0</td>
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<td><strong>8 facts</strong></td>
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<td>Multiply by 1</td>
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<td><strong>Equal Groups</strong></td>
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<td>Multiply by 2</td>
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<tr>
<td><strong>Multiplication song</strong></td>
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<td>Multiply by 3</td>
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<td><strong>Multiplication facts review</strong></td>
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<td>Multiply by 4</td>
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<td>Multiply by 5</td>
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<td>Multiply by 6</td>
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<td>Multiply by 7</td>
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<td>Multiply by 8</td>
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<td>Multiply by 9</td>
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<td>Multiply by 10</td>
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<td><strong>Multiplication tables up to 10</strong></td>
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<td><strong>Multiplication facts up to 10: true or false?</strong></td>
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<td><strong>Multiplication facts up to 10: sorting</strong></td>
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<td><strong>Multiplication facts up to 10: find the missing factor</strong></td>
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<td><strong>Multiplication facts up to 10: select the missing factors</strong></td>
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<td><strong>Kahn Academy</strong></td>
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<td><a href="https://www.khanacademy.org/math/arithmetic/multiply-divide">Get ready for multiplication</a> (Get Ready for 4th Grade)</td>
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<td></td>
<td><strong>Basic Multiplication</strong></td>
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<td><strong>Multiplication Tables for 2 – 9</strong></td>
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<td><strong>Multiplication for 10, 11, &amp; 12</strong></td>
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<td><a href="https://www.khanacademy.org/math/arithmetic/multiply-divide">Get ready for division</a> (Get Ready for 4th Grade)</td>
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<td><strong>Math Tool Kit</strong></td>
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<td><strong>2nd Grade Math Tool Kit</strong></td>
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</table>
**Week 7**: Review Adding and subtracting multidigit numbers with regrouping

<table>
<thead>
<tr>
<th><strong>Videos</strong> <em>(week 4 &amp; 5 videos)</em></th>
<th><strong>Games</strong></th>
<th><strong>Interactive Websites</strong> <em>(some are the same from week 4 &amp; 5 – feel free to go back and do ones new to you)</em></th>
<th><strong>Printable Packet</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Addition with regrouping</strong></td>
<td>Number Run: all operations through 10 <em>(app available through Apple App store &amp; Google Play)</em></td>
<td><strong>Math-Antics</strong>: Multidigit Subtraction</td>
<td><strong>Week 7 Printable Packet</strong></td>
</tr>
<tr>
<td><strong>Adding 3-Digit Numbers with regrouping</strong></td>
<td><strong>Hoppers</strong> &amp; <strong>Rush Hour Jr.</strong>: physical game that helps students develop multi-step problem solving skills</td>
<td><strong>IXL</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Subtraction with regrouping song</strong></td>
<td><strong>Smart Games</strong> has many physical, classic logic games that also help with multi-step problem solving. <strong>Try online here.</strong></td>
<td><strong>Complete the addition sentence: up to three digits</strong></td>
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</tr>
<tr>
<td><strong>3-Digit Subtraction with Regrouping</strong></td>
<td></td>
<td><strong>Add two numbers up to four digits</strong></td>
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<tr>
<td><strong>Math-Antics: Multidigit Subtraction</strong></td>
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<td><strong>Addition up to three digits: fill in the missing digits</strong></td>
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<td><strong>Complete the subtraction sentence: up to three digits</strong></td>
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<td><strong>Subtract numbers with four or more digits</strong></td>
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<td><strong>Add, subtract, multiply, and divide</strong></td>
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<td><strong>Kahn Academy</strong> <strong>Adding and Subtracting within 1,000</strong></td>
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<td><strong>Math Tool Kit</strong> <strong>2nd Grade Math Tool Kit</strong></td>
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</table>
### Week 8: Fraction Basics

<table>
<thead>
<tr>
<th>Video</th>
<th>Games</th>
<th>Interactive Websites</th>
<th>Printable Packet</th>
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</thead>
<tbody>
<tr>
<td><strong>Fractions are parts</strong></td>
<td><strong>Fraction Fling</strong> (ABCYA)</td>
<td><strong>Multiplication by Heart flashcards</strong></td>
<td><strong>Week 8 Printable Packet</strong></td>
</tr>
<tr>
<td><strong>Fractions Song</strong></td>
<td><strong>Hoppers &amp; Rush Hour Jr.</strong>: physical game that helps students develop multi-step problem solving skills</td>
<td><strong>IXL</strong> Equal parts Make halves, thirds, and fourths Make halves, thirds, and fourths in different ways Make sixths and eighths Make halves, thirds, fourths, sixths, and eighths <strong>Identify the fraction</strong> Which shape illustrates the fraction? Show fractions: fraction bars Show fractions: area models Match fractions to models Write fractions using numbers and words Fractions of number lines: unit fractions Fractions of number lines: halves, fourths, and eighths Fractions of number lines Identify fractions on number lines <strong>Kahn Academy</strong> Understand Fractions Equivalent Fractions and Comparing Fractions</td>
<td><strong>Math Tool Kit</strong></td>
</tr>
</tbody>
</table>