



## Math Summer Learning Packet

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The Math Summer Prep is for incoming Decatur students or current students who want to bridge or maintain their math skills. At Decatur, 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 Decatur 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 2<sup>nd</sup> grade 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**

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

## Week 2: Multiplication 6, 7, 8, & 9 facts

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

**Week 3: Place value up to 1,000,000 and estimating & rounding**

Videos	Games	Interactive Website	Printable Packet
<a href="#">Finding value of a digit up to 100,000</a>  <a href="#">Place value up to 1,000,000 (hundred thousands)</a>	<a href="#">Triple Digit Dare</a> (printable game – see <a href="#">Polypad Website Guide</a> for online game pieces)	<a href="#">Multiplication by Heart flashcards</a>  <b>IXL</b> <a href="#">Place value - tens and ones</a>  <a href="#">Place value - up to hundreds</a>  <a href="#">Place value - up to thousands</a>  <a href="#">Convert between place values - ones, tens, and hundreds</a>  <a href="#">Convert from expanded form - up to hundreds</a>  <a href="#">Estimate to the nearest ten</a>  <a href="#">Round to the nearest ten</a>  <a href="#">Round to the nearest ten or hundred</a>  <a href="#">Place value models up to thousands</a>  <a href="#">Place value names up to thousands</a>  <a href="#">Place value names up to hundred thousands</a>  <a href="#">Value of a digit</a>  <a href="#">Round using a number line: nearest ten or hundred</a>  <a href="#">Rounding: nearest ten or hundred</a>  <a href="#">Rounding</a>  <a href="#">Rounding money amounts</a>  <a href="#">Rounding puzzles</a>  <a href="#">Estimate sums by rounding: up to 1,000</a>  <a href="#">Rounding up to the 1,000,000s place</a>	<a href="#">Polypad Website guide</a>  <a href="#">Week 3 Printable Packet</a>
<a href="#">Rounding Numbers to 100</a>	Rounding with <a href="#">Soccer Math</a> (ABCYA)		Math Tool Kit
<a href="#">Rounding Numbers Song</a>  <a href="#">Rounding Numbers to the 10, 100, and 1000</a>	Envision Game: <a href="#">Globbing Globbs</a> (log into student SPS account)  <a href="#">Base 10 Bingo</a> (ABCYA)	<a href="#">Intro to Place Value</a> (Get ready for 4 <sup>th</sup> grade)  <a href="#">Ways to write whole numbers (words and expanded form)</a>  <a href="#">Rounding to nearest 10</a>  <a href="#">Rounding to nearest 100</a>	<a href="#">2<sup>nd</sup> Grade Math Tool Kit</a>

## Week 4: Adding multidigit numbers with regrouping

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

## Week 5: Subtracting multidigit numbers with regrouping

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



## Week 7: Review Adding and subtracting multidigit numbers with regrouping

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

## Week 8: Fraction Basics

Video	Games	Interactive Websites	Printable Packet
<p><a href="#">Fractions are parts</a></p> <p><a href="#">Fractions Song</a></p> <p><a href="#">Fractions on a Numberline</a></p> <p><a href="#">Kahn Academy Grade 3 Fraction Basics</a></p> <p><a href="#">Fractions!</a></p>	<p><a href="#">Fraction Fling (ABCYA)</a></p> <p><a href="#">Hoppers &amp; Rush Hour Jr.:</a> physical game that helps students develop multi-step problem solving skills</p> <p><a href="#">Smart Games</a> has many physical, classic logic games that also help with multi-step problem solving. <a href="#">Try online here.</a></p>	<p><a href="#">Multiplication by Heart flashcards</a></p> <p><b>IXL</b> <a href="#">Equal parts</a></p> <p><a href="#">Make halves, thirds, and fourths</a></p> <p><a href="#">Make halves, thirds, and fourths in different ways</a></p> <p><a href="#">Make sixths and eighths</a></p> <p><a href="#">Make halves, thirds, fourths, sixths, and eighths</a></p> <p><a href="#">Identify the fraction</a></p> <p><a href="#">Which shape illustrates the fraction?</a></p> <p><a href="#">Show fractions: fraction bars</a></p> <p><a href="#">Show fractions: area models</a></p> <p><a href="#">Match fractions to models</a></p> <p><a href="#">Write fractions using numbers and words</a></p> <p><a href="#">Fractions of number lines: unit fractions</a></p> <p><a href="#">Fractions of number lines: halves, fourths, and eighths</a></p> <p><a href="#">Fractions of number lines</a></p> <p><a href="#">Identify fractions on number lines</a></p> <p><b>Kahn Academy</b> <a href="#">Understand Fractions</a></p> <p><a href="#">Equivalent Fractions and Comparing Fractions</a></p>	<p><a href="#">Week 8 Printable Packet</a></p> <hr/> <p>Math Tool Kit</p> <hr/> <p><a href="#">2<sup>nd</sup> Grade Math Tool Kit</a></p>