



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 3

What incoming 3rd grade math students should know:

- Multiplication facts 1-12 and corresponding division facts
- Understand place value up to 1,000,000,000
- Addition and subtraction up to 4 digits with regrouping and borrowing.
- Adding and subtracting decimals to two places (practice with money)
- Multiplication up to 2 by 2 digit.
- Find equivalent fractions and order fractions

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!

Sample 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

Sample 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*

**Third grade is the year that students traditionally study multiplication tables and fluency is essential to study of 5th grade math. 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 2: Place value up to 1,000,000,000

Videos	Games	Interactive Websites	Printable Packet
Finding value of a digit up to 100,000 Place value up to 1,000,000 (hundred thousands)	Triple Digit Dare (printable game – see Polypad Website Guide for online game pieces)	Multiplication by Heart flashcards IXL Place value models Convert between standard and expanded form Value of a digit Relationship between place values Convert between place values Identify place value names	Polypad Website guide Week 2 Printable Packet
Place Value to Millions Place Value: Reading and Writing Large Whole Numbers Place value to the billions	Envision Game: Globbing Globbs (log into student SPS account) Base 10 Bingo (ABCYA)	Place value review Writing numbers up to 1,000 in words: convert words to digits Writing numbers up to 1,000 in words: convert digits to words Writing numbers up to 100,000 in words: convert words to digits Writing numbers up to 100,000 in words: convert digits to words Writing numbers up to one million in words: convert words to digits Writing numbers up to one million in words: convert digits to words Writing numbers up to one billion in words: convert words to digits Writing numbers up to one billion in words: convert digits to words Spell word names for numbers up to one million Kahn Academy Intro to Place Value (Get ready for 4 th grade) Place Value (Get ready for 5 th Grade) Ways to write whole numbers (words and expanded form) Rounding to nearest 10 Rounding to nearest 100	Math Tool Kit 3rd Grade Math Tool Kit

Week 3: Multiplication of 1 digit by 2-digit numbers

Videos	Games	Interactive Websites	Printable Packet
Long Multiplication Song Area Model Multiplication Multiplying 2-digit by 1 digit number Turtle Method for Multiplication Multiplication Column method	<p>Number Run: all operations through 10 (<i>app available through Apple App store & Google Play</i>)</p> <p>Rush Hour, Chocolate Fix, Dog Crimes, & Cat Crimes a physical game that helps students develop multi-step problem solving skills.</p> <p>Smart Games has many physical, classic logic games that also help with multi-step problem solving. Try online here.</p> <p>Prime Climb is a game for ages 10+ (or 8+ with adult guidance) to explore mathematical structure in multiplication, division, and prime numbers in a fast-paced, dynamic game of strategy and luck.</p>	<p>Multiplication by Heart flashcards</p> <p>IXL Multiply by a multiple of ten</p> <p>Multiply one-digit numbers by two-digit numbers using area models I</p> <p>Multiply one-digit numbers by two-digit numbers using area models II</p> <p>Multiply one-digit numbers by two-digit numbers</p> <p>Multiply 1-digit numbers by 2-digit numbers using area models I</p> <p>Multiply 1-digit numbers by 2-digit numbers using area models II</p> <p>Multiply 1-digit numbers by 2-digit numbers</p> <p>Kahn Academy with area and place value models (get ready for 5th grade) Multiplying 2-digit by 1-digit</p>	<p>Week 3 Printable Packet</p> <hr/> <p>Math Tool Kit</p> <p>3rd Grade Math Tool Kit</p>

Week 4: Adding multidigit numbers with regrouping

Videos	Games	Interactive Websites	Printable Packet
2 Digit Addition with regrouping Addition with Regrouping Adding 3-Digit Numbers with regrouping Adding multidigit numbers with regrouping (Brain Pop Jr.) Column Addition explained	<p>Summit (printable game – see Polypad Website Guide for online game pieces)</p> <p>Number Run: all operations through 10 (<i>app available through Apple App store & Google Play</i>)</p> <p>Rush Hour, Chocolate Fix, Dog Crimes, & Cat Crimes a physical game that helps students develop multi-step problem solving skills.</p> <p>Smart Games has many physical, classic logic games that also help with multi-step problem solving. Try online here.</p> <p>Prime Climb is a game for ages 10+ (or 8+ with adult guidance) to explore mathematical structure in multiplication, division, and prime numbers in a fast-paced, dynamic game of strategy and luck.</p>	<p>Multiplication by Heart flashcards</p> <p>IXL Add two numbers up to three digits</p> <p>Add two numbers up to four digits</p> <p>Add two numbers up to six digits</p> <p>Add two numbers up to five digits</p> <p>Add two numbers up to seven digits</p> <p>Kahn Academy Strategies for Adding Two and Three -Digit Numbers</p> <p>Adding with Regrouping</p>	<p>Week 4 Printable Packet</p> <hr/> <p>Math Tool Kit 3rd Grade Math Tool Kit</p>

Week 5: Subtracting multidigit numbers with regrouping

Videos	Games	Interactive Websites	Printable Packet
<p>Subtracting with regrouping</p> <p>Subtracting with ALL regroupings</p> <p>Subtracting across the zeros</p>	<p>Countdown (printable game – see Polypad Website Guide for online game pieces)</p> <p>Number Run: all operations through 10 (<i>app available through Apple App store & Google Play</i>)</p> <p>Rush Hour, Chocolate Fix, Dog Crimes, & Cat Crimes a physical game that helps students develop multi-step problem solving skills.</p> <p>Smart Games has many physical, classic logic games that also help with multi-step problem solving. Try online here.</p> <p>Prime Climb is a game for ages 10+ (or 8+ with adult guidance) to explore mathematical structure in multiplication, division, and prime numbers in a fast-paced, dynamic game of strategy and luck.</p>	<p>Multiplication by Heart flashcards</p> <p>IXL Subtract numbers up to three digits</p> <p>Subtract across zeros</p> <p>Subtract numbers with four or more digits</p> <p>Subtract numbers up to five digits</p> <p>Subtract numbers up to seven digits</p> <p>Kahn Academy Strategies for Subtracting Two and Three Digit Numbers</p> <p>Subtracting with Regrouping</p>	<p>Week 5 Printable Packet</p> <hr/> <p>Math Tool Kit 3rd Grade Math Tool Kit</p>

Week 7: Multiplying a 2-digit by 2-digit number

Videos	Games	Interactive Websites	Printable Packet
Multiplying 2-digit by 1 digit number Multiplying: 2 digits times 1 digit (with carrying) Turtle Method for Multiplication Multiplication Column method Area model Multiplication	<p>Number Run: all operations through 10 (<i>app available through Apple App store & Google Play</i>)</p> <p>Rush Hour, Chocolate Fix, Dog Crimes, & Cat Crimes a physical game that helps students develop multi-step problem solving skills.</p> <p>Smart Games has many physical, classic logic games that also help with multi-step problem solving. Try online here.</p>	<p>Multiplication by Heart flashcards</p> <p>IXL Multiply numbers ending in zeroes</p> <p>Multiply by 10 or 100</p> <p>Multiply 2-digit numbers by 2-digit numbers using area models I</p> <p>Multiply 2-digit numbers by 2-digit numbers using area models II</p> <p>Multiply a 2-digit number by a 2-digit number</p> <p>Kahn Academy Multiply by 2-Digit Numbers</p>	<p>Week 7 Printable Packet</p>
			<p>Math Tool Kit</p> <p>3rd Grade Math Tool Kit</p>

