

Math Summer Learning Packet

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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 3

What incoming 3rd grade Cascadia 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:	Sample 15 min. Schedule:
5 min warm up with a game*	5 min – warm up with a game* or watch
5 min watch a video to refine a skill	a video to refine a skill
15 min. –– interactive website or packet work	10 min – interactive website or packet work
5 min use new skills to replay game	OR
o mini doo non onico to reptay game	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.

Videos Interactive Websites Printable Packet Games Multiplication by Heart flashcards Multiply by 0 Blackout (printable game & 1 IXL - see Polypad Multiply by 0 2 facts: Week 1 Printable Website Guide Packet double! Multiply by 1 for online game pieces) 4 facts Multiply by 2 Multiply by 3 5 facts Blockout (can be Multiply by 4 played with 8 facts Math Tool Kit paper or <u>online</u>) Multiply by 5 10 facts Envision Multiply by 6 3rd Grade Math Tool Kit 3 facts (fun!) Multiply by 7 Number Run: all operations Multiply by 8 6 facts through 10 (app Multiply by 9 available through 6 facts (song!) Multiply by 10 Apple App store & <u>Google Play</u>) Multiply by 11 7 facts Multiply by 12 **Multiplication Space** Race (ABCYA) 7 skip count Multiplication tables up to 12 Prime Climb is a Multiplication facts to 12 9 facts (90s game for ages 10+ themed!) (or 8+ with adult Kahn Academy guidance) to Get ready for multiplication (Get explore 9 facts Ready for 4th Grade) mathematical structure in **Basic Multiplication** 9 facts finger multiplication, division, and prime trick Multiplication Tables for 2 - 9 numbers in a fastpaced, dynamic **Multiplication** Multiplication for 10, 11, & 12 game of strategy facts review and luck. Get ready for division (Get Ready for 4th Grade)

<u>Week 1</u>: Multiplication & Division 1 – 12 facts

<u>Week 2</u>: Place value up to 1,000,000,000

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

<u>Week 3</u>: Multiplication of 1 digit by 2-digit numbers

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

<u>Week 4:</u> Adding multidigit numbers with regrouping

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

<u>Week 5</u>: Subtracting multidigit numbers with regrouping

Videos	Games	Interactive	Printable
		Websites	Packet
<u>Subtracting</u>	Countdown (printable game – see	Multiplication by	
<u>with</u>	Polypad Website Guide for online game pieces)	<u>Heart flashcards</u>	
<u>regrouping</u>	game pieces)		Week 5
	Number Run: all operations	IXL	Printable Packet
<u>Subtracting</u>	through 10 (app available through	Subtract numbers	
with ALL	Apple App store & Google Play)	up to three digits	
<u>regroupings</u>	Rush Hour, Chocolate Fix, Dog	Subtract across	
	Crimes, & Cat Crimes a physical	zeros	
Subtracting	game that helps students develop		
across the	multi-step problem solving skills.	Subtract numbers	
zeros	Smart Games has many physical,	with four or more	
	classic logic games that also help	<u>digits</u>	
	with multi-step problem solving. Try online here.	Subtract numbers	Math Tool Kit 3 rd Grade Math
	<u>Try ontine here</u> .	up to five digits	Tool Kit
	Prime Climb is a game for ages 10+		<u>1000 mm</u>
	(or 8+ with adult guidance) to	Subtract numbers	
	explore mathematical structure in multiplication, division, and prime	<u>up to seven digits</u>	
	numbers in a fast-paced, dynamic	Kahn Academy	
	game of strategy and luck.	Strategies for	
		Subtracting Two and	
		Three Digit Numbers	
		Subtracting with	
		Regrouping	

<u>Week 6</u>: Adding and Subtracting decimal numbers (hundredths place)

Videos	Games	Interactive Websites	Printable Packet
Videos Adding and Subtracting decimals song Adding and Subtracting Decimals Addition and Subtraction of decimals (Math Antics) Subtracting Decimals	Games Number Run: all operations through 10 (app available through Apple App store & Google Play) Rush Hour, Chocolate Fix, Dog Crimes, & Cat Crimes a physical game that helps students develop multi-step problem solving skills. Smart Games has many physical, classic logic games that also help with multi-step problem solving. Try online here.	Interactive Websites Multiplication by Heart flashcards IXL Add and subtract money amounts Add decimals using blocks Add decimal numbers Subtract decimal numbers Subtract decimal numbers Add and subtract decimals Solve decimal problems using diagrams Kahn Academy Understanding decimals Decimal Place Value with Regrouping Adding Decimals (hundredths)	
		<u>Subtract Decimals (tenths and hundredths)</u>	

<u>Week 7</u>: Multiplying a 2-digit by 2-digit number

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

<u>Week 8</u>: Ordering fractions and finding equivalent fractions

Videos	Games	Interactive Websites	Printable Packet
Comparing and	Fraction Empire	Multiplication by Heart	
ordering	(printable game –	<u>flashcards</u>	
fractions	see Polypad Website	1.71	
	Guide for online	IXL Find equivalent	Week 8 Printable Packet
Comparing and	game pieces)	fractions using number	
ordering		lines Find fractions	
fractions with		equivalent to whole	
number strips	Number Run: all	numbers Benchmark fractions	
	operations through	Deficititat K fractions	
Equivalent	10 (app available	Graph and order fractions on number	
Fractions	through <u>Apple App</u>	lines	
	store & Google Play)	Order fractions with like denominators	
Modeling		Order fractions	
Equivalent	Fraction Fling	Identify equivalent	
Fractions	(ABCYA)	Identify equivalent fractions using number	
		lines Identify equivalent	Math Tool Kit
Equivalent	Rush Hour,	fractions	
Fractions	Chocolate Fix, Dog	Benchmark fractions	<u>3rd Grade Math Tool Kit</u>
	Crimes, & Cat Crimes	Compare fractions in	
Equivalent	a physical game that	recipes Graph and order	
Fractions Song	helps students	fractions on number	
3	develop multi-step	lines Order fractions with	
	problem solving	like numerators or	
	skills.	denominators Order fractions	
		<u>Order fractions</u>	
	<u>Smart Games</u> has	Find smaller or larger	
	many physical,	<u>fractions</u>	
	classic logic games	<u>Kahn Academy</u>	
	that also help with	Equivalent Fractions	
	multi-step problem	and Comparing	
	solving.	Fractions (3 rd Grade)	
	<u>Try online here</u> .	Equivalent Fractions and Comparing	
	<u></u>	Fractions (4 th Grade)	