

# Mathematics Benchmarks

## Standard 1 - Number, Operations and Concepts

EY3, EY4 and EY5 1.EY4.1.a Count forwards to 10 and backwards from 5	EY4, EY5 and Grade 1 1.EY5.1.a Count to 20 and backwards from 10	EY5 Grade 1 Grade 2 1.G1.1.a Count forwards to 100 starting at any number and backwards from 20	Grade 1 Grade 2 and Grade 3 1.G2.1.b Identify, model, represent, order and compare numbers up to 1000	Grade 2, Grade 3 and Grade 4 1.G3.1.b Identify, model, represent, order and compare numbers up to 10,000	Grade 3, Grade 4 and Grade 5 1.G4.1.b Identify model, represent, order and compare whole numbers up to 1,000,000 and decimals up to a hundredth in digit and word form	Grade 4 Grade 5 and Grade 6 1.G5.1.b Identify model, represent, order and compare numbers up to and including 8 digits and decimals using standard and expanded form
1.EY4.1.b Write and order numbers 1 to 10	1.EY5.1.b Order, identify and write numbers from 0 to 20	1.G1.1.b Identify, model, represent and order numbers 0 through 100 (>,<) using greater than, less than t	1.G2.1.c Identify place value up to 4 digits and expand	1.G3.1.c Identify place value up to 5 digits and recognize the role of 0 as a place holder	1.G4.1.c Identify place value in whole numbers up to 7-digits	1.G5.1.c Identify place value in numbers up to 8-digits
1.EY4.1.c Count a set of objects up to 10 with 1 to 1 correspondence	1.EY5.1.c Accurately manage 1 to 1 correspondence of numbers to 20	1.G1.1.c Identify place value up to 3 digits	1.G2.1.d Estimate by rounding numbers to the nearest 10	1.G3.1.d Estimate by rounding numbers to the nearest 10 and 100	1.G4.1.d Estimate by rounding numbers to the nearest thousand, hundred, ten, one and tenth	1.G5.1.d Estimate the magnitude of numbers by rounding to digits up to and including 8 digit numbers and decimals to hundredths
1.EY3/4.1.e Demonstrate ordinal numbers from 1st to 3rd	1.EY5.1.e Demonstrate ordinal numbers from 1st to 10th	1.G1.1.e Use ordinal numbers from 1st to 31st related to a calendar	1.G2.1.e Use and write the ordinal numbers from 1st to 31st as used in a calendar			

# Mathematics Benchmarks

EY3, EY4 and EY5	EY4, EY5 and Grade 1	EY5 Grade 1 Grade 2	Grade 1 Grade 2 and Grade3	Grade 2, Grade 3 and Grade 4	Grade 3, Grade 4 and Grade 5	Grade 4 Grade 5 and Grade 6
				<b>1.G3.1.f</b> Identify the place value of a tenth	<b>1.G4.1.f</b> Identify, read, write, order and compare one and two place decimal numbers and determine the value of each digit ( up to hundredths)	<b>1.G5.1.f</b> Identify, read, write, order and compare one and two place decimal numbers and determine the value of each digit (up to thousandths)
					<b>1.G4.1.g</b> Identify, read, write, order and compare negative and positive whole numbers	<b>1.G5.1.g</b> Identify, read, write, order and compare negative numbers.
						<b>1.G5.1.h</b> Identify and describe properties of prime, composite, square and triangular numbers
<b>1.EY4.2.a</b> Add/subtract 1 or 2 to a number up to 5 with manipulatives	<b>1.EY5.2.a</b> Add/subtract 1 or 2 to a number up to 10 with manipulatives and know number bonds to 10	<b>1.G1.2.a</b> Identify number bonds for numbers up to 10 and the number 20	<b>1.G2.2.a</b> Add and subtract basic number facts both orally and in written form	<b>1.G3.2.a</b> Add and subtract number facts both orally and in written form	<b>1.G4.2.a</b> Mentally add and subtract 1, 10, 100 to numbers crossing place value borders	<b>1.G5.2.a</b> Add and subtract two or more numbers that include decimals through hundredths, with regrouping
<b>1.EY4.2.b</b> Represent practical situations to a model addition and sharing up to ten	<b>1.EY5.2.b</b> Use the vocabulary and symbol of +, -, =	<b>1.G1.2.b</b> Use the range of mathematical terms for +, -, =	<b>1.G2.2.b</b> Add and subtract 2-digit numbers without regrouping	<b>1.G3.2.b</b> Add and subtract 3 digit numbers and estimate sums and differences	<b>1.G4.2.b</b> Add and subtract numbers with the same number of decimal places	<b>1.G5.2.b</b> Add and subtract numbers with the same and different number of decimal places
			<b>1.G2.2.c</b> Add three or more 1-digit numbers with sums up to 20 mentally	<b>1.G3.2.c</b> Add and subtract 3 digit numbers with regrouping/exchanging		

# Mathematics Benchmarks

EY3, EY4 and EY5	EY4, EY5 and Grade 1	EY5 Grade 1 Grade 2	Grade 1 Grade 2 and Grade 3	Grade 2, Grade 3 and Grade 4	Grade 3, Grade 4 and Grade 5	Grade 4 Grade 5 and Grade 6
		<b>1.G1.2.d</b>	<b>1.G2.2.d</b> Add or subtract multiples of 10 to each other and from a 2- or 3-digit numbers	<b>1.G3.2.d</b> Complete simple addition and subtraction using numbers in decimal form		
	<b>1.EY5.2.e</b> Represent and solve simple addition and subtraction problems to 10 using a range of strategies	<b>1.G1.2.e</b> Represent and solve simple addition and subtraction problems using a range of strategies	<b>1.G2.2.e</b> Use strategies and technology to self-check addition and subtraction problems	<b>1.G3.2.e</b> Self-check subtraction problems with addition (inverse operation)		
					<b>1.G4.2.f</b> Add and subtract positive and negative integers	<b>1.G5.2.f</b> Add and subtract positive and negative integers and two negative integers
<b>1.EY4.3.a</b> Experiment and role play with currency, especially the Euro	<b>1.EY5.3.a</b> Identify coins including Euros and Cents	<b>1.G1.3.a</b> Order and identify different amounts of money and the coins used up to 1 Euro and use in a real life context	<b>1.G2.3.a</b> Use addition and subtraction of money in real life situations.			
	<b>1.EY5.3.b</b> Experiment with coins to make simple values	<b>1.G1.3.b</b> Give change from 20 Cent or lower				
	<b>1.EY5.4.a</b> Count objects by twos up to 20	<b>1.G1.4.a</b> Count by twos, fives and tens and recognize simple patterns to 100	<b>1.G2.4.a</b> Count in tens, fifties and hundreds up to 1000	<b>1.G3.4.a</b> Use repeated addition and repeated subtraction and recognize their connection with multiplication and division	<b>1.G4.4.a</b> Find the product of 2 two-digit numbers	<b>1.G5.4.a</b> Use multiplication facts with speed and accuracy, to compute products both orally and in written form

# Mathematics Benchmarks

EY3, EY4 and EY5	EY4, EY5 and Grade 1	EY5 Grade 1 Grade 2	Grade 1 Grade 2 and Grade3	Grade 2, Grade 3 and Grade 4	Grade 3, Grade 4 and Grade 5	Grade 4 Grade 5 and Grade 6
		<b>1.G1.4.b</b> Follow the process of grouping	<b>1.G2.4.b</b> Find multiples of 2,3,4,5 and 10	<b>1.G3.4.b</b> Find fact families for single digit numbers	<b>1.G4.4.b</b> Mentally calculate division facts using inverse of multiplication tables	<b>1.G5.4.b</b>
		<b>1.G1.4.c</b> Make groups of objects (e.g.: 2 groups of 3 items makes 6 )	<b>1.G2.4.c</b> Multiply a 1-digit and 2-digit number by 10	<b>1.G3.4.c</b> Find the multiples of single digit numbers to 100	<b>1.G4.4.c</b> Identify the least (lowest) common multiple (LCM) within multiplication tables	<b>1.G5.4.c</b> Find the product of any whole and decimal number by a 3-digit number and decimals
		<b>1.G1.4.d</b> Double and halve whole numbers up to 20	<b>1.G2.4.d</b> Doubles and half of whole numbers with sums up to 100	<b>1.G3.4.d</b> Divide with single digit divisors to find single digit quotients with and without remainders	<b>1.G4.4.d</b> Complete division problems using one digit divisors and up to 3 digit dividends including remainders	<b>1.G5.4.d</b> Divide 4 digit numbers by single digit number with or without remainders
		<b>1.G1.4.e</b> Divide sets of objects into equal groups	<b>1.G2.4.e</b> Demonstrate division as the inverse of multiplication using fact families (2,3,4,5 and 10) is this too difficult for an inverse	<b>1.G3.4.e</b> Find the product of a 2 and 3 digit number and a single digit number	<b>1.G4.4.e</b> Use the inverse operation to check division calculations	<b>1.G5.4.e</b> Interpret the remainder in division problems and convert between mixed numbers and decimals
			<b>1.G2.4.f</b> Recognize and represent divisions as groupings into equal sets and solve simple problems using these representations	<b>1.G3.4.f</b> Multiply and divide 3-digit numbers by 10 and 100		<b>1.G5.4.f</b> Divide multiple digit numbers by two digit numbers without remainders

# Mathematics Benchmarks

EY3, EY4 and EY5	EY4, EY5 and Grade 1	EY5 Grade 1 Grade 2	Grade 1 Grade 2 and Grade3	Grade 2, Grade 3 and Grade 4	Grade 3, Grade 4 and Grade 5	Grade 4 Grade 5 and Grade 6
					<b>1.G4.4.g</b> Identify the least (lowest) common multiple (LCM) within multiplication tables	
					<b>1.G4.4.h</b> Investigate products involving 10, 100 and 1000 as factor	<b>1.G5.4.h</b> Mentally find products involving 10, 100, and 1000 as factors
	<b>1.EY5.5.a</b> Begin to explore relationship of part to whole in everyday situations	<b>1.G1.5.a</b> Recognize and represent simple fractions as parts of a whole	<b>1.G2.5.a</b> Interpret and compare simple proper fractions	<b>1.G3.5.a</b> Order and compare fractions	<b>1.G4.5.a</b> Use manipulatives, diagrams and models to order and compare fractions	<b>1.G5.5.a</b> Use knowledge of LCM to compare and order fractions
			<b>1.G2.5.b</b> Recognize and find equivalent fractions in context	<b>1.G3.5.b</b> Recognize and represent equivalence in simple fractions	<b>1.G4.5.b</b> Identify and demonstrate equivalent fractions	<b>1.G5.5.b</b> Present ratios and fractions in equivalent forms and apply to everyday situations
			<b>1.G2.5.c</b> Add and subtract fractions with the same denominator (within one whole)	<b>1.G3.5.c</b> Add or subtract fractions with the same denominators	<b>1.G4.5.c</b> Add and subtract simple fractions by finding a common denominator	<b>1.G5.5.c</b> Add and Subtract two fractions different denominators
			<b>1.G2.5.d</b> Find simple fractions of small amounts	<b>1.G3.5.d</b> Find fractions of amounts where the numerator is 1	<b>1.G4.5.d</b> Find proper fractions of whole numbers where numerator is greater than 1	<b>1.G5.5.d</b> Write fractions as percentages using the percent symbol and apply to everyday situations

# Mathematics Benchmarks

EY3, EY4 and EY5	EY4, EY5 and Grade 1	EY5 Grade 1 Grade 2	Grade 1 Grade 2 and Grade3	Grade 2, Grade 3 and Grade 4	Grade 3, Grade 4 and Grade 5	Grade 4 Grade 5 and Grade 6
				<b>1.G3.5.e</b> Recognize mixed number fractions	<b>1.G4.5.e</b> Convert between mixed number and improper fractions	<b>1.G5.5.e</b> Find the sum or difference of two mixed numbers and improper fractions with like and unlike denominators (without regrouping)
				<b>1.G3.5.f</b> Make connections between fractions and decimal notations	<b>1.G4.5.f</b> Convert simple fractions to decimals up to hundredths.	<b>1.G5.5.f</b> Use the four operations to solve fraction and decimal problems and apply them to everyday situations
						<b>1.G5.5.g</b> Use the LCM of denominators to compare two fractions with different denominators

## Standard 2 - Shape Space and Measure Continuum

EY3, EY4 and EY5	EY4, EY5 and Grade 1	EY5, Grade 1 and Grade 2	Grade 1, Grade 2 and Grade 3	Grade 2, Grade 3 and Grade 4	Grade 3, Grade 4 and Grade 5	Grade 4 and Grade 5
<p><b>2.EY3/4.1.a</b> Recognize, sort and name familiar 2D and 3D shapes e.g. Circle, triangle, square, rectangle, cube</p>	<p><b>2.EY5.1.a</b> Recognize and classify familiar 2D and 3D shapes.</p>	<p><b>2.G1.1.a</b> Classify and draw familiar 2D shapes</p>	<p><b>2.G2.1.a</b> Describe polygons and their properties</p>	<p><b>2.G3.1.a</b> Classify, describe, draw and visualize a wider range of 2D shapes including specific quadrilaterals and triangles</p>	<p><b>2.G4.1.a</b> Classify, compare and describe polygons using geometric terminology</p>	<p><b>2.G5.1.a</b> Classify different polygons and explain reasoning</p>
	<p><b>2.EY5.1.b</b> Recognize symmetry in basic 2D shapes</p>	<p><b>2.G1.1.b</b> Identify a line of symmetry in 2D shapes</p>	<p><b>2.G2.1.b</b> Find multiple lines of symmetry in 2D shapes</p>	<p><b>2.G3.1.b</b> Identify and draw lines of symmetry in the environment and in art</p>	<p><b>2.G4.1.b</b> Identify and create symmetrical patterns with 2 lines of symmetry.</p>	<p><b>2.G5.1.b</b> Identify points, lines, rays and segments.</p>
			<p><b>2.G2.1.c</b> Identify and describe half and quarter turns using specific mathematical terminology e.g. compass points, right angles</p>	<p><b>2.G3.1.c</b> Identify angles as measures of turn and compare angle sizes in everyday situations.</p>	<p><b>2.G4.1.c</b> Compare, recognize and draw acute and obtuse angles and use a protractor to the nearest 5 degrees</p>	<p><b>2.G5.1.c</b> Estimate, recognize and draw acute, obtuse and reflex angles and use a protractor to the nearest degree</p>
						<p><b>2.G5.1.d</b> Define, identify and draw the terms circumference, radius, diameter and center in relation to a circle</p>
		<p><b>2.G1.2.a</b> Describe properties of simple 3D shapes using terminology of faces, edges and vertices.</p>	<p><b>2.G2.2.a</b> Classify 3D shapes according to the number and shape of faces, number of vertices and edges.</p>	<p><b>2.G4.2.a</b> Make models of 3D shapes and describe their key properties</p>	<p><b>2.G4.2.a</b> Visualize and describe three-dimensional shapes from 2D nets and drawings and use nets to make common solids</p>	<p><b>2.G5.2.a</b> Apply knowledge of properties of 2D shapes to create 3D shapes</p>

# Mathematics Benchmarks

EY3, EY4 and EY5	EY4, EY5 and Grade 1	EY5 Grade 1 Grade 2	Grade 1 Grade 2 and Grade3	Grade 2, Grade 3 and Grade 4	Grade 3, Grade 4 and Grade 5	Grade 4 Grade 5 and Grade 6
<b>2.EY3/4.3.a</b> Connect days of week to familiar events	<b>2.EY5.3.a</b> Compare and order the duration of events using everyday language of time	<b>2.G1.3.a</b> Describe duration using months, weeks, days and hours	<b>2.G2.3.a</b> Use a calendar to identify the date and determine the number of days in each month	<b>2.G3.3.a</b> Investigate the relationship between units of time.	<b>2.G4.3.a</b> Use am and pm notations and solve simple time problems	<b>2.G5.3.a</b> Compare 12 and 24 hr time systems
	<b>2.EY5.3.b</b> Tell the time to the hour on an analogue clock	<b>2.G1.3.b</b> Tell time to the half hour on a digital and analogue clock	<b>2.G2.3.b</b> Tell the time to the nearest 5 minutes on analogue and digital clocks	<b>2.G3.3.b</b> Tell the time to the minute	<b>2.G4.3.b</b> Convert between units of time	<b>2.G5.3.b</b> Investigate and solve more complex time problems in everyday situations
			<b>2.G3.3.c</b> Calculate elapsed time between events within an hour	<b>2.G4.3.c</b> Calculate elapsed time between events over an hour		
<b>2.EY3/4.4.a</b> Use direct and indirect comparisons to decide which is longer, heavier or holds more and explain reasoning in everyday language	<b>2.EY5.4.a</b> Measure and compare the length, mass and capacity of pairs of objects using nonstandard units of measure	<b>2.G1.4.a</b> Estimate, measure and compare the length, mass and capacity of objects using non-standard and standard units	<b>2.G2.4.a</b> Estimate, measure, compare, add and subtract lengths, mass and volume	<b>2.G3.4.a</b> Estimate, measure and compare objects using familiar metric units of length, mass, area and volume	<b>2.G4.4.a</b> Choose the appropriate metric unit and estimate and measure length, area, volume and capacity, mass and temperature	<b>2.G5.4.a</b> Use all four operations of number to solve problems using measure - length, mass, capacity and volume, using decimal notation and including scaling
			<b>2.G2.4.b</b> Describe relationships between metric standard units in length, mass and volume	<b>2.G3.4.b</b> Read a variety of scaled instruments to measure length, mass, capacity and temperature and convert between measurements	<b>2.G4.4.b</b> Convert between common metric units and write measurements in different forms	<b>2.G5.4.b</b> Convert between common metric units of length, mass, capacity and volume using decimal representation of the metric system
					<b>2.G4.4.c</b> Calculate perimeter and area of rectangles and squares using familiar metric units	<b>2.G5.4.c</b> Measure and calculate the perimeter and area of rectilinear shapes



# Mathematics Benchmarks

EY3, EY4 and EY5	EY4, EY5 and Grade 1	EY5 Grade 1 Grade 2	Grade 1 Grade 2 and Grade 3	Grade 2, Grade 3 and Grade 4	Grade 3, Grade 4 and Grade 5	Grade 4 Grade 5 and Grade 6
<b>2.EY3/4.5.a</b> Follow simple directions related to position	<b>2.EY5.5.a</b> Describe position and movement using everyday language of location and direction	<b>2.G1.5.a</b> Give and follow directions using terminology such as clockwise, anticlockwise, forwards and backwards	<b>2.G2.5.a</b> Locate positions on a grid using 2 point coordinates	<b>2.G3.5.a</b> Describe and plot positions on a grid as co-ordinates in the first quadrant	<b>2.G4.5.a</b> Describe positions on a Cartesian coordinate graph	<b>2.G5.5.a</b> Identify and plot coordinates in all four quadrants of a Cartesian Coordinate graph
			<b>2.G2.5.b</b> Investigate the effect of one step translate and flips with or without technologies	<b>2.G3.5.b</b> Describe how a figure, translates, reflects and rotates	<b>2.G4.5.b</b> Identify, describe and represent the position of a shape following a reflection or translation using the appropriate language (angle and direction)	<b>2.G5.5.b</b> Predict and draw the position of a shape following a reflection, translation or rotation on a coordinate plane, using appropriate language
			<b>2.G2.5.c</b> Identify and describe half and quarter turns using specific mathematical terminology e.g. compass points, right angles			

## Standard 4 - Data Handling and Statistic

EY3, EY4 and EY5	EY4, EY5 and Grade 1	EY5, Grade 1 and Grade 2	Grade 1, Grade 2 and Grade 3	Grade 2, Grade 3 and Grade 4	Grade 3, Grade 4 and Grade 5	Grade 4 and Grade 5
<b>4.EY4.a</b> Sort objects by simple properties	<b>4.EY5.a</b> Sort objects by specific properties	<b>4.G1.a</b> Select appropriate questions and collect relevant primary data	<b>4.G2.a</b> Identify a question of interest and gather relevant primary data	<b>4.G3.a</b> Pose questions and collect primary data	<b>4.G4.a</b> Pose questions to select and trial methods for primary data collection.	<b>4.G5.a</b> Pose questions and collect both categorical and numerical data.
<b>4.EY4.b</b> Collect and organize data using simple displays and make simple inferences	<b>4.EY5.b</b> Represent and compare data using a graph or drawing and make simple inferences	<b>4.G1.b</b> Represent data with objects or drawings, where one object represents one data value	<b>4.G2.b</b> Use primary and secondary data to construct relevant visual representations	<b>4.G3.b</b> Construct different forms of graphs appropriate for the data collected	<b>4.G4.b</b> Organize and display the data using a selection of charts and graphs.	<b>4.G5.b</b> Display data using a wide variety of charts and graphs that represent one or composite variable
	<b>4.EY5.c</b> Interpret data e.g. who is the tallest in the class? Using a graph and make simple inferences connected to comparison.	<b>4.G1.c</b> Use visual representation to make simple inferences and comparison	<b>4.G2.c</b> Use visual representation of primary and secondary data to make inferences and compare data.	<b>4.G3.c</b> Interpret and compare primary and secondary data displays	<b>4.G4.c</b> Read, describe, and interpret primary and secondary data presented in charts and graphs with a variety of scales.	<b>4.G5.c</b> Describe and interpret different data sets in context.
				<b>4.G3.d</b> Extract information from primary and secondary data to solve comparison, sum and difference problems	<b>4.G4.d</b> Calculate the mode, median and range of a set of data, given in a form of a list	<b>4.G5.d</b> Gather and interpret data by finding the mean, median, mode and range.
		<b>4.G1.e</b> Identify outcomes of familiar events, describe them using everyday language	<b>4.G2.e</b> Identify practical activities and everyday events that involve chance.	<b>4.G3.e</b> Conduct chance experiments and identify and describe possible outcomes and recognize the variation in results	<b>4.G4.e</b> Use data, simple probability experiments and everyday events to make simple predictions and describe the chances of occurrence.	<b>4.G5.e</b> Find likely outcomes and represent probabilities of those outcomes using simple fractions, decimals and percentages.