Assessing Mathematics at Kuwait National English School

A Guide to the English National Curriculum for Parents

2019-20

Year 1

Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
Count, read and write numbers to 100 in numerals.
Identify numbers as odd or even.
Count in multiples of twos.
Count in multiples of fives.
Count in multiples of tens.
Given a number, identify one more and one less.
Identify and represent numbers using objects and pictorial representations including the number line.
Use terms: equal to, more than, less than (fewer), most and least in reference to values and quantities.
Read and write numbers from 1 to 20 in numerals and words.

Four Operations

Read, write and interpret mathematical statements involving +, - and = signs.
Represent and use number bonds and related subtraction facts within 20
Add one digit and two digit numbers to 20 including zero.
Subtract one digit and two digit numbers to 20 including zero.
Solve one step problems +/-, using concrete objects and pictorial representations,
Solve missing number problems (e.g. 7 = __ - 9) using concrete objects and pictorial representations.
Solve 1-step problems involving x and ÷, using concrete objects, pictorial representations and arrays with the support of the teacher.

Fractions, Decimals and Percentages

Recognise, find and name a half as one of two equal parts of an object, shape or quantity
Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Measurement

As part of solving reasoning problems, use the correct terms to compare and describe:	Mass/weight (heavy/light; heavier than/lighter than)
	Length and height (long/short; longer/shorter; tall/short; double/half)
	Volume (full/empty; more than/less than; half; half-full; quarter)
	Time (quicker, slower, earlier and later)

Recognise and know the value of different denominators of coins and notes.
Chronologically sequence using before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.
Recognise and use language relating to dates, including days of the week, weeks, months and years
Tell the time to the hour and half past the hour and draw the hands on a clock to show these times.

Properties of Shape and Position

Recognise and name common 2-D shapes (e.g rectangles [including squares], circles and triangles).
Recognise and name common 3-D shapes (e.g. cuboids [including cubes], pyramids and spheres).
Describe position, direction and movement, including whole, half, quarter and three-quarter turns.

Other Expectations

Recite times table's forwards and recall multiples out of order.	x2s
	x5s
	x10s

Accurately read measures from a scale (e.g. graduated measuring jug).
Know the order of the months of the year
Know the order of the days in a week.
Number bonds to 100.

Year 2

Count forward in steps of 2s, 3s and 5s.
Secure recall of all times tables and division facts incl. x2, x5 and x10
Count in steps of tens from any number, forward and backwards.
Recognise the place value of each digit in a two-digit number (tens and ones)
Identify, represent and estimate numbers using different representations (e.g. number line).
Compare and order numbers from 0 up to 100 using <, > and = signs.
Read and write numbers to at least 100 in numerals and in words.
Four Operations
Use concrete objects and pictorial representations to +/- quantities and measures.
Apply their increasing knowledge of mental and written methods to word problems.
Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.
+/- a 2-digit number and ones using concrete objects, pictorial representations and mentally.
+/- a 2-digit number and tens using concrete objects, pictorial representations and mentally.
+/- two 2-digit numbers using concrete objects, pictorial representations and mentally.
+/- three 1-digit numbers using concrete objects, pictorial representations and mentally.
Show that addition of 2 numbers can be done in any order (commutative) but subtraction cannot.
Check calculations and solve missing number problems using inverse operations (+ and -)
Identify numbers as being either odd or even.
Write mathematical statements for multiplication and division using x, ÷ and = signs.
Show that multiplication of 2 numbers can be done in any order (commutative) but division cannot.
Solve one-step reasoning problems involving multiplication and division using materials, arrays, repeated addition, mental methods, and multiplication and division facts.
Solve two-step reasoning problems involving multiplication and division using materials, arrays, repeated addition, mental methods, and multiplication and division facts.
Fractions, Decimals and Percentages
Recognise, find, name and write fractions ¾, ¼, ½. of a length, shape, set of objects or quantity.
Write simple fractions for example, ½ of 6 = 3.
Recognise the equivalence of simple fractions (e.g. $^2/_4 = ½$).
Measurement
Choose and use appropriate standard units to estimate lengths, heights, masses, temperatures etc.
Use appropriate equipment (e.g. rulers, scales and thermometers) to measure accurately.
Compare and order lengths, mass, volume/capacity and record the results using >, < and =.
Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.
Find different combinations of coins that equal the same amounts of money.
Solve simple +/- reasoning problems that involve money (including giving change).
Compare and sequence intervals of time.
Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.
Know the number of minutes in an hour and the number of hours in a day.
Properties of Shape and Position
Describe the properties of 2-D shapes, including the n° of sides and vertical lines of symmetry.
Describe the properties of 3-D shapes, including the n° of edges, vertices and faces.
Identify 2-D shapes on the surface of 3-D shapes, [for example, circles on the ends of a cylinder]
Compare and sort common 2-D and 3-D shapes and everyday objects.
Use mathematical vocabulary to describe position, direction and movement, including movement clockwise, anticlockwise, right angles, quarter turns and three-quarter turns.
Identify and make predictions from representations of patterns and sequences.
Statistics
Interpret and construct simple tally charts and tables.
Interpret and construct simple pictograms and block diagrams.
Ask and answer simple questions by collecting data and sorting categories by quantity.
Ask and answer questions about totaling and comparing categorical data.

Other Expectations	
Recite times tables forwards and backwards and instantly recall multiples and division facts out of order.	x2s
	x5s
	x10s
Accurately read measures from a scale (e.g. graduated measuring jug).	
Know the order of the months of the year	
Know the order of the days in a week.	
Number bonds to 100.	

Year 3

Secure recall of all times tables and division facts incl. x2, x3, x4, x5, x6, x8, x10 and x11
Count from 0 in multiples of 50 and 100.
Find 10 less/more and 100 less/more than any 3-digit number.
Recognise the place value of each digit in a three-digit number. (hundreds, tens, ones)
Compare and order numbers up to 1000.
Identify and estimate numbers using different representations (e.g. on number line / pictorial grouping).
Read and write numbers up to 1000 in numerals and in words.
Solve number problems and practical problems involving all of the above ideas.
Four Operations
Add and subtract numbers mentally, including: a three-digit number + ones / + tens / + hundreds
+/- numbers with up to three digits, using formal written methods of addition and subtraction.
Estimate the answer to a calculation and use inverse operations to check answers.
Solve problems, including missing number problems, using number facts, place value and +/-.
Use addition/subtraction to solve multi-step reasoning problems.
Use multiplication and division facts for the 3, 4 and 8 multiplication tables in reasoning problems.
Write and calculate mathematical statements for multiplication and division including for TO x O.
Use multiplication and division to solve positive integer scaling problems and correspondence problems (n objects are connected to m objects).
Fractions, Decimals and Percentages
Count up and down in tenths; recognise that tenths arise from dividing a quantity by 10.
Find and write fractions of a discreet number of objects (e.g. from diagrams).
Recognise and use unit and non-unit (with small denominator) fractions as numbers.
Recognise and show, using diagrams, equivalent fractions with small denominators.
Add and subtract fractions with the same denominator within one whole, e.g. ¾ - ¼ =
Compare and order unit fractions, and fractions with the same denominators.
Solve problems involving all of the above.
Measurement
Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity.(l/ml)
Add and subtract amounts of money to give change, using both £ and p in practical contexts.
Tell and write the time from an analogue clock to the nearest minute.
Identify roman numerals I to XII in the context of a clock face.
Tell and write the time using both 12-hour and 24-hour clocks. Convert time between the two.
Use vocab. such as o'clock, a.m. /p.m., morning, afternoon, noon and midnight in reference to time.
Know the number of seconds in a minute, days in each month, days in a year and leap year etc.
Compare durations of events (for example to calculate the time taken by particular events or tasks.)
Properties of Shape and Position
Draw and make 2-D shapes using modelling materials.
Measure the perimeter of simple 2-D shapes.
Recognize and make 3-D using modelling materials and describe them (faces, vertices, edges).
Recognise angles as a property of shape or a description of a turn.
Identify right angles and recognise that 2 = half-turn; 3 = ¾ turn; 4 = full turn
Identify whether angles are greater than or less than a right angle.
Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
Statistics
Interpret and present data using bar charts, pictograms and tables.
Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] Using information presented in scaled bar charts, pictograms, and tables.

Other Expectations	
Recite times tables forwards and backwards and instantly recall multiples and division facts out of order.	x2s
	x3s
	x4s
	x5s
	x6s
	x8s
	x10s
	x11s
Accurately read measures from a scale (e.g. graduated measuring jug).	
Know the order of the months of the year	
Know the order of the days in a week.	
Number bonds to 100.	

Year 4

Secure recall of all times tables and division facts up to 12 x 12.
Count in multiples of 25, 50, 100, 250, 500 and 1000.
Find 1000 more or less than a given number.
Count backwards through zero to include negative numbers.
Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
Order and compare numbers beyond 1000.
Identify, represent and estimate numbers using different representations.
Round any number to the nearest 10, 100 or 1000.
Multiply / divide one- or two-digit numbers by 10 and 100 (to decimal answers)
Read Roman numerals to 100 (I to C) and understand that, for example, 99 = 90+9 (XCIX)
Solve reasoning problems that involve all of the above and with increasingly large positive numbers.
Four Operations
Add and subtract numbers with up to 4 digits using columnar addition and subtraction.
Estimate and use inverse operations to check answers to a calculation.
Use addition and subtraction to solve two-step reasoning problems.
Use the concept of zero and positive numbers to multiply by 0 and 1 and divide by 1.
Mentally multiply three numbers together.
Identify all factor pairs of a number
Multiply two-digit and three-digit numbers by a one-digit number using a formal, written method.
Use distributive law to multiply two digit numbers by one digit number [e.g. 15 x 8 = (10x8)+(5x8)]
Use the concept of correspondence to solve basic ratio problems (n objects are connected to m objects).
Use multiplication and division to solve two-step reasoning problems.
Fractions, Decimals and Percentages
Recognise and show, using diagrams, families of common equivalent fractions.
Count up and down in hundredths; recognise that hundredths are $1 \div 100$ or $^1/_{10} \div 10$.
Solve problems involving increasingly harder fractions (incl. non-unit fractions) to calculate quantities
Add and subtract fractions with the same denominator.
Recognise and write decimal equivalents of any number of tenths or hundredths.
Recognise and write decimal equivalents to ½, ¾ and ¼.
Round decimals with one decimal place to the nearest whole number.
Compare numbers with the same number of decimal places up to two decimal places.
Solve simple measure and money problems involving fractions and decimals to two decimal places.
Measurement
Convert between different units of measure [for example, kilometre to metre; hour to minute]
Measure and calculate the perimeter of a rectilinear figure (incl. squares) in centimetres and metres.
Find the area of rectilinear shapes by counting squares.
Estimate, compare and calculate different measures, including money in pounds and pence.
Read, write and convert time between analogue and digital 12- and 24-hour clocks.
Solve time problems involving converting from h→min.; min. → s; years → months etc
Properties of Shape and Position
Classify geometric shapes, incl. quadrilaterals and triangles, based on properties and sizes.
Identify acute and obtuse angles and compare and order angles up to two right angles by size.
Identify lines of symmetry in 2-D shapes presented in different orientations.
Complete a simple symmetric figure with respect to a specific line of symmetry.
Statistics
Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
Solve comparison, sum and difference problems using bar charts, pictograms, tables and other graphs.

Other Expectations	
Recite times tables forwards and backwards and instantly recall multiples and division facts out of order.	x2s
	x3s
	x4s
	x5s
	x6s
	x7s
	x8s
	x9s
	x10s
	x11s
	x12s
Tell the time on an analogue clock.	
Accurately read measures from a scale (e.g. graduated measuring jug).	
Know the order of the months of the year	
Know the number of days in each month	
Know the order of the days in a week.	

Year 5

Read, write, order and compare numbers to 1 000 000.
Identify the value of each digit in a number from millions to thousandths.
Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.
Interpret negative numbers and count forwards/backwards through zero.
Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.
Round decimals with two decimal places to the nearest whole number and to one decimal place.
Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.
Solve number problems and practical problems that involve all of the above.
Four Operations
Add and subtract whole numbers with more than 4 digits using compact method.
Add and subtract numbers mentally with increasingly large numbers.
Solve addition multi-step problems in contexts.
Solve subtraction multi-step problems in contexts.
Identify multiples and factors, including finding all factor pairs of a number.
Find all common factors of two numbers.
Use the terms prime and composite, and establish whether a number up to 100 is prime.
Multiply numbers up to 4 digits by a one- or two-digit number using the compact method.
Divide numbers up to 4 digits by a one-digit number using short division.
Interpret division remainders as whole numbers and fractions.
Recognise and use square numbers and cube numbers, and the notation for squared and cubed.
Apply knowledge of squares, cubes, factors and multiples in reasoning problems.
Solve multiplication multi-step problems in contexts.
Solve division multi-step problems in contexts.
Solve problems of scaling by simple fractions and simple rates.
Fractions, Decimals and Percentages
Compare and order fractions whose denominators are all multiples of the same number.
Identify, name and write equivalent fractions of a given fraction (including tenths and hundredths).
Convert between mixed numbers and improper fractions.
Add and subtract fractions with the same denominator / denominators that are multiples
Multiply proper fractions and mixed numbers by whole numbers.
Read and write decimal numbers as fractions.
Recognise and use thousandths and relate them to tenths, hundredths etc.
Read, write, order and compare numbers with up to three decimal places.
Solve problems involving number up to three decimal places.
Recognise the per cent symbol and write %s as a fraction with denominator 100, and as a decimal.
Solve problems which require knowing percentage and decimal equivalents of ½ ¼ 1/5 and 2/5 and those fractions with a denominator of a multiple of 10 or 25.
Measurement
Convert between different units of metric measure (e.g. L → ml; m→km etc.)
Use approximate equivalences to convert between metric and imperial units.
Solve problems involving converting between units of time.
Use 4 ops to solve problems involving measure [e.g. length, mass, volume, money] up to 2d.p.
Properties of Shape and Position
Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.
Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.
Calculate and compare the area of rectangles (incl. squares) in $mm^2/cm^2/m^2$.
Estimate and calculate volume of basic 3D shapes built of cubes/cuboids.
Identify, estimate and compare acute, obtuse and reflex angles.
Use a protractor to draw and measure given angles in degrees.
Calculate angles at a point on a whole turn (total 360°), on a straight line (total 180°) and within a right-angle (90°)
Use the properties of rectangles to find missing lengths and angles.
Distinguish between regular and irregular polygons based on side lengths and angles.

Represent the position of a shape following a reflection/translation and know that it hasn't changed.
Statistics
Solve comparison, sum and difference problems using information presented in a line graph.
Complete, read and interpret information in tables, including timetables.

Other Expectations	
Recite times tables forwards and backwards and instantly recall multiples and division facts out of order.	x2s
	x3s
	x4s
	x5s
	x6s
	x7s
	x8s
	x9s
	x10s
	x11s
	x12s
Instantly recall all square numbers and square roots (up to 12^2 / √144)	
Identify whether any number is prime or not.	
Count in steps of 20.	
Count in steps of 25.	
Count in steps of 50.	
Recall all prime numbers up to 19.	
Tell the time on an analogue clock.	
Convert between 12 hour and 24 hour time.	
Calculate time intervals between two clocks.	
Accurately read measures from a scale (e.g. graduated measuring jug).	

Year 6

Read, write, order and compare numbers up to 10 000 000.
Identify the value of each digit in numbers from tens of millions to thousandths.
Round any whole number to a required degree of accuracy.
Use negative numbers in context, and calculate intervals across zero.
Multiply and divide numbers by 10, 100 and 1000 giving answers up to 3 decimal places.
Solve reasoning problems that involve all of the above.
Four Operations
Identify common factors, common multiples and prime numbers.
Use the compact method to add/subtract numbers up to 2 decimal places.
Solve multi-step reasoning problems that feature addition and/or subtraction (compact method).
Multiply multi-digit whole numbers (up to 4 digits) by a 2-digit whole number using compact method.
Multiply one-digit numbers with decimal numbers (up to O.th) using the compact method.
Divide numbers up to 4 digits by a one-digit number using short division.
Divide numbers up to 4 digits by a two-digit whole number using long division.
Calculate division answers up to 2 decimal places.
Interpret division remainders as whole numbers, fractions or decimals.
Solve multi-step reasoning problems that feature multiplication and/or division.
Use knowledge of the order of operations (BIDMAS) to carry out calculations involving the four ops.
Use estimation to check that answers are reasonable.
Fractions, Decimals and Percentages
Put fractions into their simplest form.
Compare and order fractions, including fractions > 1.
+/- Fractions with different denominators and mixed numbers by standardising the denominator.
Multiply proper fractions by proper fractions/whole numbers, writing answer in its simplest form.
Divide proper fractions by proper fractions and whole numbers.
Identify fractions as divisions and calculate decimal equivalents for a simple fraction.
Recall equivalences between common Fractions, Decimals and Percentages.
Measurement
Solve reasoning problems involving the calculation of percentages [e.g. calculate 15% of 360ml].
Solve reasoning problems that require unit conversions for measures of length, mass, volume and time (e.g. cm→m) with answers up to 3 d.p.
Convert between miles and kilometres.
Algebra
Use simple formulae in calculations
Generate and describe linear number sequences.
Express missing number problems algebraically.
Find pairs of numbers that satisfy an equation with two unknowns.
Ratio and Proportion
Use integer multiplication and division facts to scale up/down a quantity (e.g. scaling a recipe).
Solve problems involving similar shapes where the scale factor is known or can be found.
Apply knowledge of ratio/percentages of 360° to proportionately represent data in a pie chart.
Interpret information from data represented in a pie chart.
Properties of Shape and Position
Draw 2-D shapes using given dimensions and angles using a ruler and protractor.
Recognise, describe and build simple 3-D shapes, including making nets.
Compare and classify geometric shapes (incl. regular/irregular and types of triangle).
Find unknown angles in any triangle, quadrilateral or regular polygon.
Calculate the perimeter of a range of 2D shapes.
Calculate the area of triangles.

Calculate the area of parallelograms.
Recognise that shapes with the same areas can have different perimeters and vice versa.
Illustrate and name the radius, diameter and circumference of a circle (and known D=2r).
Calculate missing angle where angles meet at a point, are on a straight line or are vertically opposite
Describe positions on the full coordinate grid (all four quadrants).
Draw and translate simple shapes on the coordinate plane, and reflect them in the axis.
Calculate, estimate and compare volume of cubes and cuboids using standard units (e.g. cm^3 / m^3).
Statistics
Interpret and construct line graphs and use these to solve problems.
Calculate and interpret the mean as an average.

Other Expectations	
Recite times tables forwards and backwards and instantly recall multiples out of order.	x2s
	x3s
	x4s
	x5s
	x6s
	x7s
	x8s
	x9s
	x10s
	x11s
	x12s
Instantly recall all square numbers and square roots (up to 12^2 / $\sqrt{144}$)	
Recall all prime numbers up to 30.	
Identify whether any number is prime or not.	
Count in steps of 20.	
Count in steps of 25.	
Count in steps of 50.	
Tell the time on an analogue clock.	
Convert between 12 hour and 24-hour time.	
Calculate time intervals between two clocks.	
Accurately read measures from a scale (e.g. graduated measuring jug).	