

Year 7 — Full learning objectives

65 objectives across 8 units · MYP Year 1

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UNIT 1

7.1 Positive Integers

1. I can apply tests of divisibility for 2, 3, 4, 5, 6, 8, 9, and 10 to decide whether a number is divisible without calculating.
2. I can identify and list multiples of any given number.
3. I can recognise and evaluate powers (e.g. $2^3 = 8$) and roots (e.g. $\sqrt{169} = 13$), including the first few square and cube numbers.
4. I can continue a number sequence using a term-to-term rule.
5. I can find all the factors of a number and list them systematically.
6. I can identify prime numbers and explain why a number is or is not prime.
7. I can write a number as a product of its prime factors using a factor tree (e.g. $12 = 2 \times 2 \times 3$).
8. I can find the Highest Common Factor (HCF) of two numbers using listing strategies.
9. I can find the Lowest Common Multiple (LCM) of two numbers using listing strategies.
10. I can use a Venn diagram to find HCF and LCM from prime factor decompositions.

7.2 Directed Numbers

1. I can place positive and negative numbers correctly on a number line and describe their distance from zero.
2. I can order directed numbers from smallest to largest (and vice versa).
3. I can add negative numbers to both positive and negative numbers (e.g. $5 + (-3) = 2$).
4. I can subtract negative numbers from positive and negative numbers (e.g. $4 - (-2) = 6$).
5. I can multiply and divide positive and negative numbers.
6. I can apply the order of operations (BIDMAS) correctly with brackets, powers, and negative numbers.

7.3 Introduction to Algebra

1. I can use correct algebraic vocabulary: term, expression, equation, variable, coefficient, constant.
2. I can apply correct algebraic conventions (e.g. write $3n$ not $n3$, write n^2 not $n \times n$).
3. I can form simple algebraic expressions from a word description or context.
4. I can form a simple equation from a problem or context.
5. I can collect (simplify) like terms in an expression.
6. I can write algebraic products correctly (e.g. $a \times b = ab$, $3 \times a \times a = 3a^2$).
7. I can expand a single bracket using repeated addition and the area model (e.g. $3(x + 2) = 3x + 6$).
8. I can substitute numerical values into simple expressions and evaluate the result.
9. I can solve one-step equations formally (e.g. $x + 3 = 11$, $5x = 25$, $x \div 8 = 2$).

7.4 Decimals & Measurement

1. I can understand place value in decimal numbers and compare / order decimals.
2. I can add and subtract decimal numbers, keeping digits aligned by place value.
3. I can read measurement scales correctly, including those using negative values.
4. I can measure and calculate the perimeter of shapes given in decimal units.
5. I can multiply and divide by powers of 10 (10, 100, 1000).
6. I can convert between metric units of length (mm, cm, m, km), mass (mg, g, kg), and capacity.
7. I can round whole numbers to the nearest 10, 100, or 1000.
8. I can round decimals to 1, 2, or 3 decimal places.
9. I can divide decimal numbers by whole numbers.
10. I can choose the most appropriate unit of measurement for a given context.

7.5 Fractions & Percentages

1. I can find equivalent fractions and simplify fractions to their simplest (lowest) form.
2. I can convert between mixed numbers and improper fractions.
3. I can compare and order fractions, including those with different denominators.
4. I can add and subtract fractions, including those with different denominators.
5. I can multiply fractions together and multiply a fraction by a whole number.
6. I can divide fractions, including dividing by a whole number.
7. I can explain what a percentage means and represent it as a fraction out of 100.
8. I can find a percentage of a quantity (e.g. 30% of 240).
9. I can find a fraction of a quantity.
10. I can convert between simple fractions, decimals, and percentages (e.g. $\frac{3}{4} = 0.75 = 75\%$).

7.6 Statistics

1. I can describe and classify data as categorical, numerical, discrete, or continuous.
2. I can describe different methods of data collection and design a simple survey.
3. I can identify outliers in a data set and comment on their effect.
4. I can calculate the mean, median, and mode of a data set.
5. I can calculate the range of a data set.
6. I can construct and interpret frequency tables.
7. I can calculate the mean, median and mode from a frequency table.
8. I can draw comparative bar charts and label them correctly.
9. I can read and interpret different types of statistical graphs (bar charts, pictograms, line graphs, pie charts).

7.7 Shape and Measure

1. I can identify and classify polygons by their properties (number of sides, regularity, convexity).
2. I can convert metric units of length, mass, capacity and area.
3. I can calculate the perimeter of rectangles, squares and triangles.
4. I can calculate the area of rectangles, squares, triangles, parallelograms and trapezia.
5. I can calculate the perimeter and area of rectilinear compound shapes.

7.8 Angles

1. I can estimate, measure and construct an angle.
 2. I can classify angles as acute, obtuse and reflex.
 3. I can find angles on a straight line, about a point, in triangles and quadrilaterals.
 4. I can identify angles in parallel lines (corresponding, alternate, co-interior).
 5. I can classify triangles as scalene, isosceles, equilateral, right, acute or obtuse.
 6. I can classify quadrilaterals using their properties, including diagonals and symmetry.
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