

Curriculum Basics Year 2

Divisibility of natural (counting) numbers:

- factors and multiples
- divisibility rules
- prime numbers, writing a number as a product of prime factors using a factor tree
- HCF (highest common factor) and LCM (lowest common multiple)

Angles:

- angles (review)
- duplicating angles
- adding and subtracting angles graphically (without using the protractor – ohne Winkelmesser)
- types of angles (corresponding, alternate, co-interior, supplementary, complementary)
- angle operations and word problems

Fractions:

- types of fractions: proper and improper fractions, mixed numbers
- converting fractions into mixed numbers and mixed numbers into fractions
- fractions of quantities, relativer Anteil
- converting fractions into decimals and decimals into fractions
- terminating and recurring decimals (endliche, periodische und gemischt periodische Dezimalzahlen)
- changing into equivalent fractions, reducing fractions to the lowest terms (erweitern und kürzen von Brüchen)
- comparing fractions (vergleichen und ordnen von Brüchen)
- addition and subtraction of fractions and mixed numerals
- multiplication of fractions by counting numbers and by fractions
- division of fractions by counting numbers and by fractions
- combining all four operations (Verbindung der vier Grundrechenarten mit Brüchen)
- word problems with fractions

Geometry:

- the number plane (coordinate system)
- Symmetrie, spiegeln von Figuren
- perpendicular bisector (Streckensymmetrale)
- angle bisector (Winkelsymmetrale)
- Winkelkonstruktionen ohne Winkelmesser (bestimmte Winkel ausgehend vom 60°- Winkel)
- classification and properties of triangles
- interior and exterior angles of a triangle, sum of the interior and of the exterior angles of a triangle
- construction of triangles and congruency theorems:
 - (a) Side-Side-Side theorem (Seiten-Seiten-Seiten-Satz)
 - (b) Angle-Side-Angle theorem (Winkel-Seiten-Winkel-Satz)
 - (c) Side-Angle-Side theorem (Seiten-Winkel-Seiten-Satz)
 - (d) Side-Side-Angle theorem, the ambiguous case (Seiten-Seiten-Winkel-Satz, nicht-eindeutiger Lösungsfall)
- land surveying - Vermessungsaufgaben
- special properties of triangles / (die merkwürdigen Punkte H, U, I und S) and constructions of:
 - orthocenter H, circumcentre U, incentre I, centre of gravity (centroid) S
 - (e) Euler's line

Equations and formulae:

- solving simple text problems by first forming an equation and then solving this equation
- finding the subject of a formula
- finding the value of a pronumeral (variable) that is not the subject of a formula
- word problems

Percentages:

- simple conversions
- percentage bar and pie charts
- calculating the part (Prozentanteil), the percentage (Prozentsatz) and the whole (Grundwert)
- word problems

Geometry – the right - angled triangle:

- construction of right-angled triangles using the Theorem of Thales
- calculating the area of a right-angled triangle, converse problems (Umkehraufgaben)
- word problems