



Singapore Maths Innovative Learning Experience (SMILE Singapore)

Secondary 2 Content List

Secondary 2

Using pictorial methods and graphical illustrations increases your child's understanding of Algebra by two-fold. Through animated representation of angles and its properties, your child develops a deep sense of imagery, which is useful when dealing with properties of a circle, modelling and scale drawings.

Content List

Numbers

Title	Synopsis
Lesson 1	Learn what is standard form.
Worksheet 1	Homework for Lesson 1.
Quiz 1	Recap of Lesson 1.
Lesson 2	Learn about maps and scales.
Lesson 3	Practice questions on maps and scales.
Lesson 4	Learn about scale drawing.
Lesson 5	Practice questions on scale drawing.
Worksheet 2	Homework for Lessons 2 to 5.
Quiz 2	Recap of Lessons 2 to 5.
Lesson 6	Learn about Direct Proportion
Lesson 7	Learn about Direct Proportion.
Lesson 8	Learn about Indirect Proportion.
Lesson 9	Learn about Indirect Proportion.

Algebra

Title	Synopsis
Lesson 1	Learn about the square of sums algebraic identity.
Lesson 2	Practice questions on the square of sums algebraic identity.
Worksheet 1	Homework for Lessons 1 and 2.
Lesson 3	Learn about the square of difference algebraic identity.
Lesson 4	Practice questions on the square of difference algebraic identity.
Worksheet 2	Homework for Lessons 3 and 4.
Lesson 5	Learn about the difference of squares algebraic identity.
Lesson 6	Practice questions on the difference of squares algebraic identity.

Worksheet 3	Homework for Lessons 5 and 6.
Lesson 7	Summary on the square of sum and difference, and difference of squares algebraic identities.
Quiz 1	Recap of Lessons 1 to 7.
Lesson 8	Learn what is a function (part 1).
Lesson 9	Learn what is a function (part 2).
Quiz 2	Recap of Lessons 8 and 9.
Lesson 10	Using the elimination method to solve equations with two unknowns.
Lesson 11	Practice using the elimination method to solve equations with two unknowns.
Worksheet 4	Homework for Lessons 10 and 11.
Lesson 12	Using the substitution method to solve equations with two or more unknowns (part 1).
Lesson 13	Using the substitution method to solve equations with two or more unknowns (part 2).
Worksheet 5	Homework for Lessons 12 and 13.
Quiz 3	Recap of Lessons 10 to 13.
Lesson 14	Solving linear equations using graphs.
Lesson 15	Practice solving linear equations using graphs.
Worksheet 6	Homework for Lessons 14 and 15.
Quiz 4	Recap of Lessons 14 and 15.
Lesson 16	Learn the square root of algebraic fractions.
Lesson 17	Practice questions on the square root of algebraic fractions.
Worksheet 7	Homework for Lessons 16 and 17.
Quiz 5	Recap of Lessons 16 and 17.
Lesson 18	Learn about quadratic functions and its properties.
Lesson 19	Finding the roots of a quadratic equation using a formula.
Lesson 20	Finding the roots of a quadratic equation using factorisation (part 1).
Lesson 21	Finding the roots of a quadratic equation using factorisation (part 2)
Lesson 22	Finding the roots of a quadratic equation using graphs.
Lesson 23	Using graph to solve a quadratic equation.
Worksheet 8	Homework for Lessons 18 to 23.
Quiz 6	Recap of Lessons 18 to 23.
Lesson 24	Using the completing the square method to factor quadratic equations.
Lesson 25	Practice using the completing the square method to factor quadratic equations.
Worksheet 9	Homework for Lessons 24 and 25.
Quiz 7	Recap of Lessons 24 and 25.

Geometry

Title	Synopsis
Lesson 1	Learn what are similar triangles.
Lesson 2	Learn what are congruent triangles.
Lesson 3	Practice questions on similar triangles and congruent triangles.
Worksheet 1	Homework for Lessons 1 to 3.
Quiz 1	Recap of Lessons 1 to 3.
Lesson 4	Learn what is the Pythagoras theorem.
Lesson 5	Practice questions on Pythagoras theorem.
Worksheet 2	Homework for Lessons 4 and 5.

Quiz 2	Recap of Lessons 4 and 5.
Lesson 6	Introduction to trigonometry, parts of a triangle and the sine function.
Lesson 7	Learn what is cosine and tangent.
Lesson 8	Finding the volume of a triangular and rectangular pyramid.
Lesson 9	Finding the surface area of a triangular and rectangular pyramid.
Lesson 10	Practice questions on the volume and surface area of triangular and rectangular pyramids.
Worksheet 3	Homework for Lessons 8 to 10.
Quiz 3	Recap of Lessons 8 to 10.
Lesson 11	Learn about the surface area and volume of cone.
Lesson 12	Learn about the surface area and volume of sphere.
Lesson 13	Learn about the surface area and volume of sphere.
Lesson 14	Learn what is Heron's formula - how to find the area of a triangle given its 3 sides.
Lesson 15	Practice finding the area of a triangle given its 3 sides using Heron's formula.
Worksheet 4	Homework for Lessons 14 and 15.
Lesson 16	Finding the height of a triangle given its 3 sides.
Lesson 17	Practice finding the height of triangle given its 3 sides.
Worksheet 5	Homework for Lessons 16 and 17.
Quiz 4	Recap of Lessons 16 to 17.
Lesson 18	Finding the area of a polygon.
Lesson 19	Practice finding the area of a polygon.
Worksheet 6	Homework for Lessons 18 and 19.
Quiz 5	Recap of Lessons 18 and 19.
Lesson 20	Learn what is a Radian.
Lesson 21	Learn about the terms in properties of circles.
Lesson 22	Learn about properties of circles.
Lesson 23	Practice questions on the properties of a circle.
Lesson 24	Practice questions on the properties of a circle.
Worksheet 7	Homework for Lessons 20 to 24.
Quiz 6	Recap of Lessons 20 to 24.

Statistics

Title	Synopsis
Lesson 1	Learn what is a histogram.
Worksheet 1	Homework for Lesson 1.
Lesson 2	Learn what is a stem and leaf diagram.
Worksheet 2	Homework for Lesson 2.
Lesson 3	Finding the mode, median and mean.
Worksheet 3	Homework for Lesson 3.
Lesson 4	Practice questions on histogram, stem and leaf diagram, mode, median and mean.
Worksheet 4	Homework for Lesson 4.
Quiz 1	Recap of Lessons 1 to 4.
Lesson 5	Learn what is probability.
Lesson 6	Practice questions on probability.
Worksheet 5	Homework for Lessons 5 and 6.
Quiz 2	Recap of Lessons 5 and 6.

