

5. Mathematics

Introduction:

Mathematics involves observing, representing and investigating patterns; observing quantitative relationships in physical and social phenomena and between mathematical objects themselves.

The subject:

- develops mental processes that enhance logical and critical thinking;
- supports accuracy and problem-solving that will contribute to decision-making;
- provides access to critical careers;
- develops skills to perform role in society;
- develops logical and critical thinking in human activity.

Content in Grade 9

There are **five main Content Areas**.

- Numbers, operations & relationships;
- Patterns, functions and algebra;
- Space and Shape (Geometry);
- Measurement; and
- Data handling.

Each content area builds specific skills in working with whole numbers, exponents, integers, common fractions, decimal fractions, numeric and geometric patterns, functions and relationships, algebraic expressions and equations, graphs, geometry, constructions of geometric figures, area and perimeter, surface area, volume, Pythagoras and data handling.

Time allocation:

You will receive **4.5 hours of teaching time every week**. In addition to this you will need to spend time at home working on exercises/ activities and applying what you have been taught in class.

Assessment

During the year you will complete different assessment tasks. Your performance in these tasks will inform the teachers and parents of your progress. You have 10 Formal Assessment Tasks and an end of the year examination. Your performance in mathematics will also determine whether you can continue with mathematics or with Mathematical Literacy. Therefore you need to do your best in all the assessment items to ensure a good year mark.

Tips for achieving success in Mathematics:

1. Do your homework regularly.
2. Try your best not to be absent.
3. Find a study partner.
4. Establish a good relationship with your teacher.
5. Analyse and understand your mistakes.
6. Get help fast if you don't understand.
7. Ask questions.
8. Know your basic skills.
9. Algebra must be mastered.
10. Understand the functions of your calculator.

Pass requirement in Gr. 9: at least 40%

Do not work towards the minimum mark! Always try to get 50% and more!

Study Tips for Maths in Class

- Draw anything the teacher draws.
- Take notes as the teacher explains.
- Ask for extra sample problems.
- Review yesterday's notes before class.

Remember: Success in mathematics is not magic – it requires you to work hard for at least 5 days per week. You can succeed!

