

MATHEMATICS TEST

Year 9 – Part B2

Spring 2005

**The contents of this test material
must remain *secret* until June 30, 2015.**

This part consists of questions you may work with for about 50 minutes.

It is very important that you explain clearly and completely how you solve the questions.

This part of the test can give a maximum of 5 g-points and 5 vg-points. The symbol \propto indicates that you have the opportunity to demonstrate MVG-quality in your solutions.

Aids: Calculator

Name: _____

School: _____ Class: _____

Birth Date: Year _____ Month _____ Day _____

Girl ☐ Boy ☐

All calculations and answers should be written on paper that is handed in at the end of the test. The test packet must be handed in with your solutions.

Finding a pattern with three numbers in a sequence

Choose three whole numbers that follow directly after each other, e.g. 6, 7, 8

Multiply the largest one by the smallest one, $6 \cdot 8 = 48$

Multiply the middle number by itself, $7 \cdot 7 = 49$

- Make these calculations for *several different* sequences of three other numbers that follow directly after one another. Describe in words and formulas the results of your investigation.
- Investigate in *the same way* three other numbers that follow each other in some other pattern e. g. 6, 8, 10 or 6, 9, 12. Describe in words and formulas the results of this investigation.

(5/5) ✖

In assessing your solution, the teacher will consider

- what mathematical knowledge you have demonstrated
- how well you have explained and presented your work and made your calculations
- how well you have defended and motivated your conclusions.