

MATHEMATICS TEST
Year 9 – Part B2
Spring 2003

The contents of this test material must remain *secret* until June 30, 2013.

This part consists of one larger problem that you will work with for about 50 minutes.

It is very important that you write a complete solution in which you explain your reasoning.

In the box above the problem you can see what aspects are important for the teacher in assessing and evaluating your solution. This problem can give a maximum of 5 “Pass” points (G) and 7 “Pass-with-distinction” points (VG). The symbol \propto indicates that you have the opportunity of displaying “Pass-with-special-distinction” quality (MVG) in your solution.

Aids: calculator, ruler.

Name: _____

School: _____ Class: _____

Birth date: Year _____ Month _____

Day _____

Girl ☐ Boy ☐

All solutions and answers must be written on appropriate writing paper provided. The question paper must be handed in together with your solutions.

In assessing your solution the teacher will consider

- what mathematical knowledge you have demonstrated
- how well you have drawn your figures and presented your solutions
- how well you have explained your reasoning and conclusions.

Rectangles

- I
- a) Draw a rectangle. You may choose any base (length) and height (width) you wish.
 - b) Draw a new rectangle, which has a base that is 2 cm longer and a height that is 1 cm shorter than in the first rectangle. Calculate and compare the areas of the two rectangles.
- II Description: Two rectangles, A and B, have the same area. The base in rectangle B is 2 cm longer than the base in rectangle A, and the height for rectangle B is 1cm shorter than the height of rectangle A.
- a) Draw two rectangles that fit this description above and mark the dimensions on the rectangles.
 - b) Draw or describe more *pairs of rectangles* that fit the description above. Investigate the relationship between such *pairs of rectangles*. Describe your conclusions and relationships using words or formulas.

(5/7) ✎