

SUBJECT TEST

# Mathematics

GRADE

9

Tests which are re-used are protected by paragraph 3 of Chapter 4 of the Official Secrets Act.

The intention is for this test to be re-used until **2018-06-30**.

This should be considered when determining the applicability of the Official Secrets Act.

Spring 2012

## Part B2

Name

## Instructions – Part B2

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

It is very important that you carefully explain the reasoning in your solution.

In the box below the question you can see what considerations the teacher will apply in assessing your work. At the most the question can yield 6 g-points and 5 vg-points. The symbol  $\square$  indicates that you may demonstrate MVG-qualities in your solution.

Aids: Access to calculator and formula sheet.

Name: \_\_\_\_\_

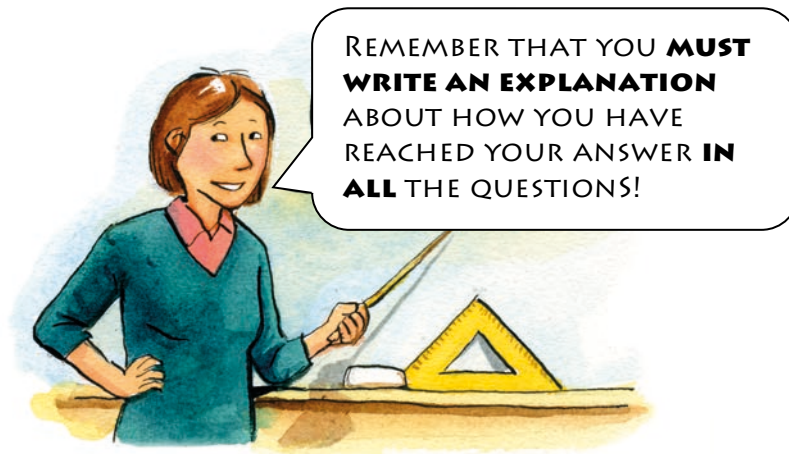
School: \_\_\_\_\_ Class: \_\_\_\_\_

Birth date: Year \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_

Female ☐ Male ☐

**Solutions and answers must be written on separate paper, not on this question paper. The question paper must be handed in, together with your solution.**

## Mean and median for four numbers



1. You have the numbers 1, 9, 2 and 4.
  - a) *The mean* for these four numbers is 4. Show that this is correct.
  - b) *The median* for the four numbers is 3. Show that this is correct too.
2. *The mean* for four numbers is 9. Three of the numbers are 4, 11 and 16. What is the fourth number?
3. *The median* for four numbers is 10. Three of the numbers are 8, 3 and 12. What values might the fourth number have?
4. *The mean* for four numbers is 6. Two of the numbers are 4 and 7. We represent the other two numbers as  $a$  and  $b$ . Investigate what the numbers might be.
  - a) Give three different suggestions for the numbers  $a$  and  $b$ .
  - b) Describe the relationship between the numbers  $a$  and  $b$  using words or a formula.
5. *The median* for four numbers is 7. Two of the numbers are 5 and 10. We represent the other two numbers as  $c$  and  $d$ , where  $d$  is greater than or equal to  $c$ . Investigate what the numbers might be.
  - a) Give three different suggestions for the numbers  $c$  and  $d$ .
  - b) Explain what the greatest possible value for  $d$  can be.

(6/5) ✎

### In assessing your work the teacher will take into consideration

- what mathematical knowledge you have shown and how well you have carried out the task
- how well you have explained your work and defended your conclusions
- how well you have presented your solution.

