

Mathematics

Delprov C

Elevhäfte

1b

Elevens namn och klass/grupp

Instructions – Part C

Time for the test 60 minutes for Part C.

Aids Allowed aids on Part C are digital devices, formula sheet and ruler.

Tasks This part consists of one large task. In your work it is required of you to

- show your solutions
- explain/motivate your thinking
- draw figures when required.

Grading limits The test (Part A–D) gives a total maximum of 89 points.

Limit for test grade

E: At least 21 points.

D: At least 35 points of which at least 11 points at level C or higher.

C: At least 46 points of which at least 20 points at level C or higher.

B: At least 58 points of which at least 6 points at level A.

A: At least 67 points of which at least 11 points at level A.

Name: _____

Date of birth: _____

Secondary program: _____ Class: _____

Also write your name, date of birth, secondary program and class on the sheets you hand in.

Illustration: Jens Ahlbom

14. Think of a number

Play with numbers

- Think of a two-digit positive integer
- Calculate the sum of the digits.
- Subtract the sum of the digits from the number you were thinking of.

Example

I am thinking of the number 68

The sum of the digits is $6+8=14$

$68 - 14 = 54$ Answer = 54

- ➔ Think of a new integer, and play the number game.
- ➔ Repeat the game with new integers until you discover what the results have in common. What do the numbers (results) have in common?
- ➔ Show that your discovery is true for all two-digit positive integers.
Clue: The value of the two-digit number ab is written as $10 \cdot a + b$
- ➔ Investigate whether your discovery is also true for three-digit positive integers. (3/5/4)



When assessing your work, the teacher will consider

- what mathematical knowledge you have shown and how well you have carried out the task
- how well you have explained your work and given reasons for your conclusions
- how well you have presented your work

