

# Mathematics

## Student Booklet

Part I and Part II

# 1b

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Elevens namn och klass/grupp



## Instructions – Part I and Part II

<b>Time</b>	90 minutes for Part I and Part II. We recommend that you use a maximum of 45 minutes for working with Part I. You may not start using digital devices until you have handed in your answers to Part I.
<b>Aids</b>	<b>Part I:</b> Approved formula page and ruler. <b>Part II:</b> Digital devices, approved formula page and ruler.
<b>Part I</b>	This part consists of questions that are to be solved without digital devices. Some of the questions require writing solutions in the figures or in the box near the question. Other questions require only the answer. After each question the maximum number of points possible for your solution/answer is shown.
<b>Part II</b>	This part contains a larger question, which normally requires more time. In the box near the question you can read what considerations the teacher will make when assessing your work.
<b>Grading limits</b>	<p>The test (oral part and written parts) gives a total maximum of 89 points.</p> <p><i>Lower limits for the test grade</i></p> <p>E: at least 22 points.</p> <p>D: at least 34 points of which at least 10 points at level C or higher.</p> <p>C: at least 47 points of which at least 19 points at level C or higher.</p> <p>B: at least 55 points of which at least 6 points at level A.</p> <p>A: at least 65 points of which at least 11 points at level A.</p>

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

Date of birth: \_\_\_\_\_

Secondary school program: \_\_\_\_\_

## Part II

14. The length of this page is 297 mm and the width is 210 mm. This format is called A4.

If you place two A4-pages with the long sides adjacent to each other, you get a format called A3.

If you instead fold an A4-page at the middle with the shorts sides adjacent to each other you have a format called A5. If you then fold the A5 in the same way you get a format called A6.

- Voting ballots have format A6. Determine how many such ballots fit on an A4-page.
- The largest page in the A-series is called an A0-page. Determine the area of an A0-page. Explain how you solved this task.
- In the diagram there is a point marked showing the width and length for an A4-page. Mark in the diagram the corresponding points for the width and length for the A6-, A5- and A3-pages. Investigate the relationship between the length and the width for the different page formats. Describe the relationship in words and/or using a formula. Show any calculations you have done.
- One of Europe's smallest daily newspapers – Tryon Daily Bulletin – is printed in the format 215 mm × 280 mm. Many Swedish daily papers, e.g. Metro and Svenska Dagbladet are printed in tabloid format 280 mm × 397 mm. Mark these formats in the diagram. What conclusions can you make?

Length of paper: 297 mm

(4/4/3)

*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 reasoning and defended your conclusions.
- How well you have presented your written solution.







