

Mathematics

Part B

Student Booklet

1a

Elevens namn och klass/grupp

Instructions – Part B

Time for the test 90 minutes for Part B and Part C. You will get both parts at the same time. We recommend that you use no more than 45 minutes for work on Part B. When you have handed in your answers to Part B you may start using digital devices.

Aids Allowed aids on Part B are formula sheet and ruler.

Tasks This part consists of tasks to be solved without using digital devices. Some of the tasks require working, which is to be shown in the figure and the box next to the task. For the other tasks only the answer is required. The maximum number of points that you can get for your answer/solution is shown after each task.

Grading limits The test (Part A–D) gives a total maximum of 85 points.

Lower limit for test grade

- E: At least 21 points.
- D: At least 34 points of which at least 10 points at level C or higher.
- C: At least 44 points of which at least 18 points at level C or higher.
- B: At least 55 points of which at least 5 points at level A.
- A: At least 65 points of which at least 9 points at level A.

Name: _____

Date of birth: _____

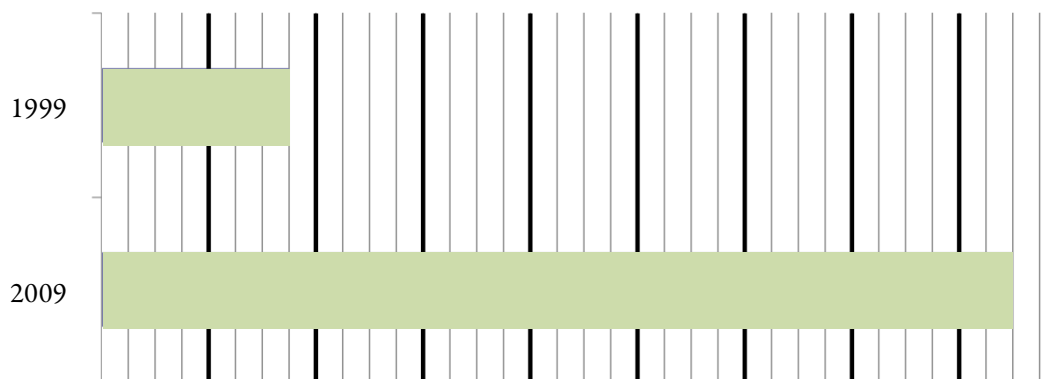
Secondary program: _____

Part B

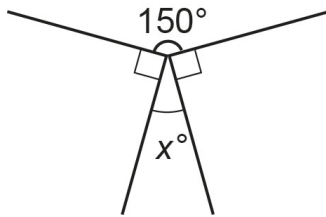
1. What percentage increase/decrease corresponds to a change factor of 0.4? Answer: _____ % (2/0/0)

2. How many minutes are there in 1.75 hours? Answer: _____ minutes (1/0/0)

3. The diagram below shows the number of internet users in the world in 1999 and 2009. In 1999 there were about 350 million internet users. Roughly how many users were there in 2009? Show your solution in the figure and the box. (2/0/0)



4. What is the value of the angle x in the figure?



Answer: _____° (2/0/0)

5. Which of the following numbers is the best approximate value of $\frac{148}{0.53}$? Circle your answer.

50 80 100 300 750 (1/0/0)

6. A formula for calculating VAT has been entered in a calculation sheet. What will the cost be with VAT?

	A	B
1	Price without VAT	800
2	Price with VAT	=1,25*B1

Answer: _____ SEK (2/0/0)

7. Solve the equation $15.8 = 2x - 7.2$
Show your solution in the box.

Answer: $x =$ _____ (2/0/0)

NO DIGITAL DEVICES ALLOWED

8. The carbon dioxide concentration of air is 393 ppm. Write this concentration as a decimal. Answer: _____ (1/0/0)

9. At a school there are twice as many boys as girls. What is the probability that a randomly chosen pupil is a girl? Answer: _____ (0/2/0)

10. When Pelle got a pay rise of 1.5 % it was SEK 300. How many SEK would he have received as a pay rise, if the pay rise had been 4 %? Answer: _____ SEK (0/2/0)

11. There are two sweets of the same size left in a bag. One is green. The other sweet is either red or green. If you take a sweet, what is the probability that the sweet you take will be green? Show your solution in the box.

Answer: _____

(0/2/0)

12. What number or numbers among the alternatives shown below are greater than 2 per mille? Circle your answer.

$$\frac{2}{2000}$$

$$0.00201$$

$$\frac{1}{499}$$

$$\frac{1}{501}$$

$$1.9 \cdot 10^{-3}$$

(0/1/1)

13. 15 % of a is equal to b .
Write 30 % of $3a$ expressed in terms of b .
Show your solution in the box.

Answer: _____

(0/1/2)

