

Mathematics

Delprov B

Årskurs

9

Elevens namn och klass/grupp

Instructions – Part B

This part consists of tasks to be solved without a calculator or formula sheet. For one of the tasks you must show your work, and for the others you only have to write the answer.

The maximum number of points you can get for your solution is shown after each task. For example, (1/1/0) means that the task can give 1 E-point, 1 C-point and 0 A-points.

Time for the part: 80 minutes in total for Part B and Part C. We recommend that you use no more than 40 minutes on Part B. You may not use your calculator until you have handed in Part B.

Write your answers in the test booklet.

Name: _____

School: _____ Class: _____

Date of birth (year/month/day): _____

Good luck!

Illustrations: Jens Ahlbom

CALCULATOR NOT ALLOWED

1. Calculate $13.9 - 8.85$ Answer: _____ (1/0/0)

2. Which of the following numbers is the best approximation of $\frac{13}{4.32}$?
Circle your answer.

0.03 0.3 3 30 300 (1/0/0)

3. In the picture, the side of the sign is 3 cm, and in reality it is 6 dm. In what scale is the sign depicted?
Circle your answer.



20:1 3:6 1:2 1:6 1:20 (1/0/0)

4. Calculate $3^2 + 2^3$ Answer: _____ (1/0/0)

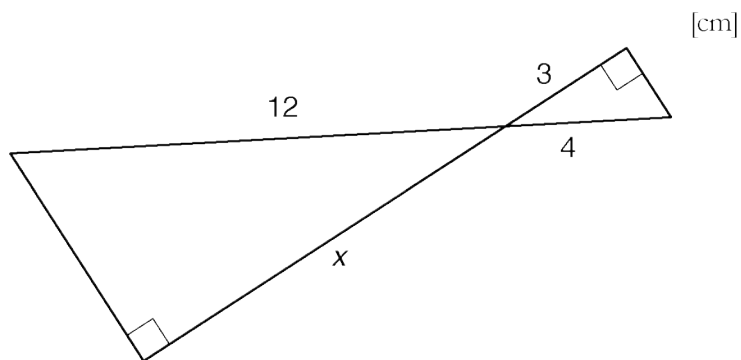
5. A bag of sweets weighs 250 g and costs SEK 21.50.
What is the price per kilo? Answer: _____ SEK/kg (1/0/0)

6. Solve the equation $25 - 5x = 10$

Answer: $x =$ _____

(1/0/0)

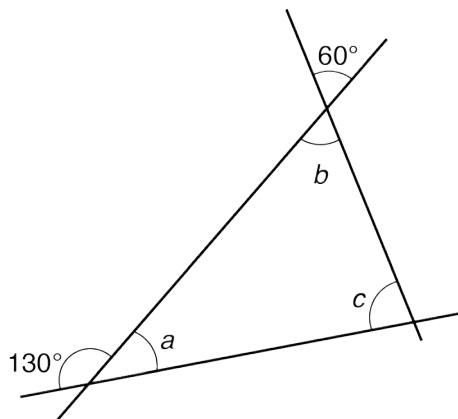
7. The figure consists of two similar triangles.
How long is the length x ?
The figure is not drawn to scale.



Answer: _____ cm

(2/0/0)

8. The figure below shows three lines intersecting to form a triangle.
The figure is not drawn to scale.



Determine the angles a , b and c .

$a =$ _____ $^{\circ}$ $b =$ _____ $^{\circ}$ $c =$ _____ $^{\circ}$

(2/1/0)

9. The product of three prime numbers is 105.
Which are the three numbers?

Answer: _____ (1/1/0)

10. The mean value of five integers is 7.
The median is 9. Give a suggestion for
which five integers this could be.

Answer: _____ (1/1/0)

11. What is half of $\frac{3}{4}$?
Give your answer as a fraction.

Answer: _____ (0/1/0)

12. The sum of one positive and one negative integer
is -2 . Give a suggestion for which two integers
this could be.

Answer: _____ and _____ (0/1/0)

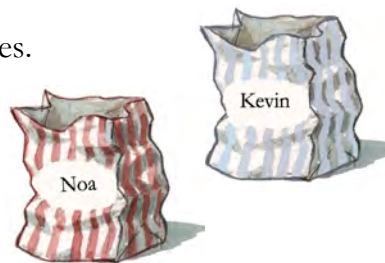
13. 23 teachers at a school take the car to work. Some of the teachers travel in the same car. Fill in the frequency missing from the table.

Number of teachers in the car	Number of cars (frequency)
1	
2	5
3	2

(0/1/0)

14. Kevin and Noa each have a bag of chocolates. Both bags contain the following mix:

8 pieces of milk chocolate
 7 pieces of dark chocolate
 6 pieces of white chocolate



- a) Kevin takes a piece of chocolate out of his bag. What is the probability that he will get a piece of *white* chocolate?

Answer: _____

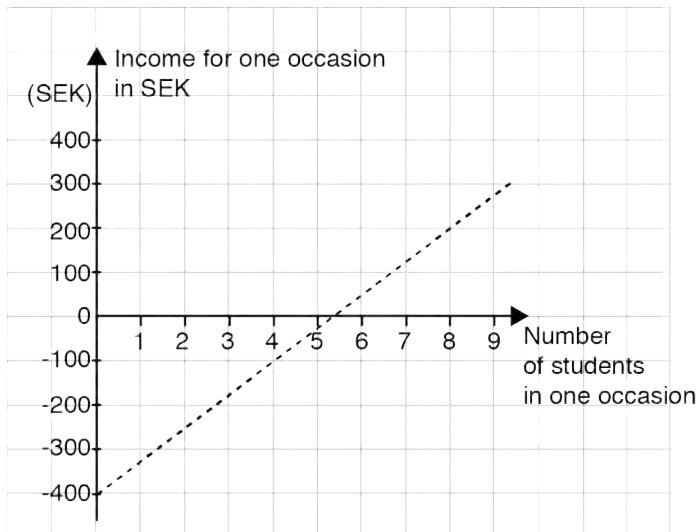
(1/0/0)

- b) Noa takes two pieces of chocolate out of his bag. What is the probability that he will get two pieces of *milk* chocolate?

Show your work here.

(0/1/2)

15. Leila gives a guitar class, where the students pay SEK 75 each occasion. She rents a room that costs SEK 400 for each occasion. The diagram shows the relationship between Leila's income and the number of students.



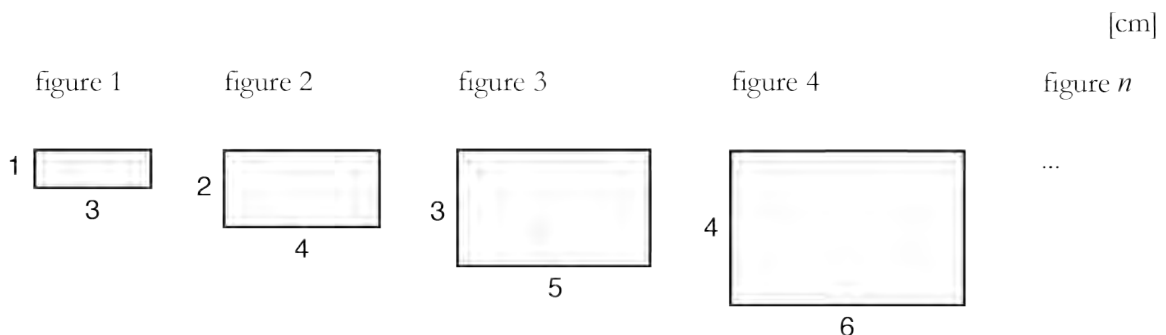
- a) How many students need to attend the class for Leila to make a profit at one occasion?

Answer: _____ (1/0/0)

- b) Write a formula for how Leila's income (I) depends on the number of students (n) at one occasion.

Answer: $I =$ _____ (0/1/1)

16. Below are the first four figures in a series. Write an expression for the area of figure n .
The figures are not drawn to scale.



Answer: _____ cm^2 (0/0/2)

