

Mathematics

Delprov D

Årskurs

9

Elevens namn och klass/grupp

Instructions – Part D

Complete solutions are required for most of the tasks. A complete solution means that you have shown your work clearly enough for another person to read and understand it. It is important that you show all of your work. You can get points for a partly solved task.

No points are given for the correct answer on its own, other than in the tasks marked *Only the answer is required*.

The maximum number of points you can get for your solution is shown after each task. For example, (2/1/0) means that the task can give 2 E-points, 1 C-point and 0 A-points.

Aids: Calculator, ruler and formula sheet.

Time for the part: 100 minutes.

Solutions and answers must be written on a separate sheet of paper (but you may, for example, draw a graph in the diagram in the booklet). This test booklet is to be handed in along with your solutions.

Name: _____

School: _____

Class: _____

Birth date (year/month/day): _____

Good luck!

Illustrations: Jens Ahlbom



When assessing your work, the teacher will consider

- what mathematical knowledge you have shown, and how well you have completed the tasks
- how well you have shown your work
- how well you have motivated the answers.

The tasks in this part are about different parties.

24. There are 460 people eating at a school party. They can choose between hamburgers, hot dogs and pasta salad. Of those eating at the party, 60 % choose hamburgers and 150 people choose hot dogs.
How many people choose pasta salad? (3/0/0)



25. Amira is mixing punch for a party and uses the following recipe.

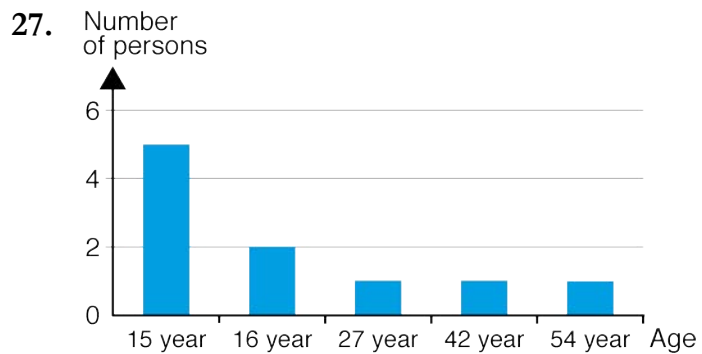
12 litres of juice
30 litres of cider
21 litres of mineral water

During the evening Amira needs to refill the punch bowl. How many litres of mineral water does Amira need to mix another 27 litres of punch?



26. For dessert, Leo is serving scoops of ice cream. He estimates that each scoop is a sphere with a diameter of 5 cm. How many full scoops can he make from a tub of ice cream containing 2 litres?





The chart shows the ages of all the people at a party. Use the chart and determine if each statement is true or false. Motivate your answer for each statement, using reasoning or calculations.

(2/1/0)

- The median is 27 years
- The mean is 23 years
- The range is 54 years

28. Amira is cooking for a party. She is making 240 portions of salmon. She knows that around 40 % of the salmon's weight is thrown away when it is cleaned. One portion of cleaned salmon is approximately 200 g. How many kilograms of salmon does she need to buy?

(1/2/0)



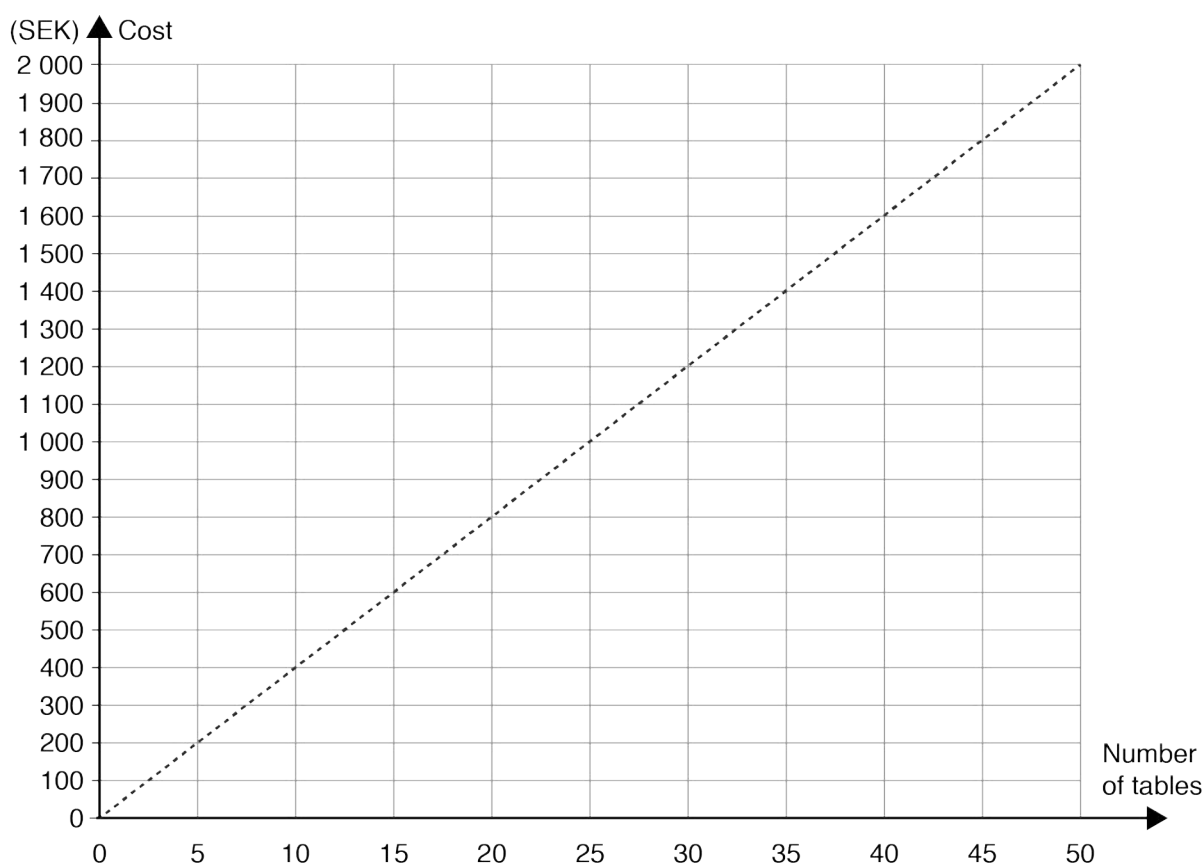
29. The school is renting tables for a party. The table and chart show prices from two different companies.

- **Company “Party Supplies”**

This company has a fixed fee and a fee based on the number of tables.

Number of tables	5	10	15	20	25	30
Cost	SEK 650	SEK 800	SEK 950		SEK 1 250	SEK 1 400

- **Company “Partymakers”**



- What does it cost to rent 20 tables from “Party Supplies”?
Only the answer is required. (1/0/0)
- What is the fixed fee from “Party Supplies”?
Only the answer is required. (1/0/0)
- Which company is cheaper if you are renting 60 tables?
Motivate your answer. (1/1/0)
- Write a formula for the cost (C) of renting tables (t) from each company respectively. (1/1/1)

30. The pupils are bringing money to a party to buy lottery tickets, soft drinks and snacks.

Amira has brought twice as much money as Kevin.

Simon has SEK 50 less than Amira.

Johan has 3 times as much money as Simon.

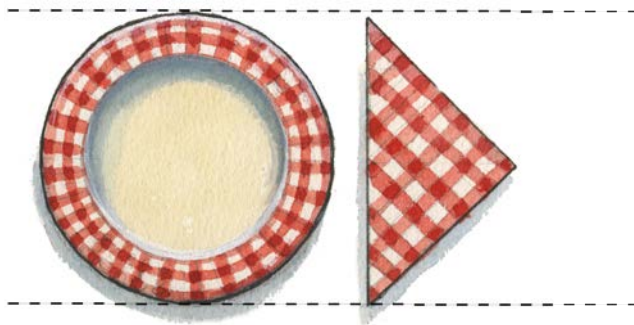
Together they have SEK 735.

How much money does Johan have?

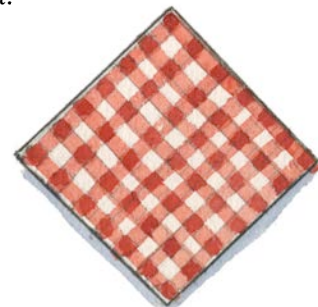
(1/2/1)



31. Kevin is laying out plates and napkins for a party.
A plate is shaped like a circle and has a diameter of 28 cm.



- a) What is the plate's area? (2/0/0)
- b) The patterned part of the plate has an area that is half the area of the total plate. How wide is the patterned area? (0/2/1)
- c) Kevin folds the napkins diagonally. How long do the sides of the square napkins have to be in order for the place setting to look like the picture above? (0/1/2)



32. Leo is one of 240 people serving food at the Nobel Banquet. Each year, 30 of these are randomly replaced. What is the probability that Leo will serve food at the party again for the coming 3 years?

(0/1/1)



33. A number of adults have signed up for the party. If each adult pays SEK 125 for a ticket, they will need another SEK 2 225 to cover all expenses. If each adult pays SEK 170 for a ticket, there will be SEK 970 to spare. How many adults have signed up for the party?

(0/1/2)



