

**MATHEMATICS TEST**  
**Year 9 – Part C**  
**Spring 2003**

**The contents of this test material must remain *secret* until June 30, 2013.**

After each question the maximum total number of points possible for your solution is shown. (2/1) indicates that the question can give 2 “Pass” points (G) and 1 “Pass-with-distinction” point (VG). In your solutions to questions marked  $\alpha$ , you have the opportunity to display “Pass-with-special-distinction” quality (MVG).

Complete solutions are required for all questions.

Merely a correct answer does not give any points.

Your solution must be clear enough so that others can easily read and understand your reasoning. It is important that you show all your work since it is possible to obtain part of the points for a partial solution.

Aids: calculator, ruler.

Test period: 80 minutes.

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

School: \_\_\_\_\_ Class: \_\_\_\_\_

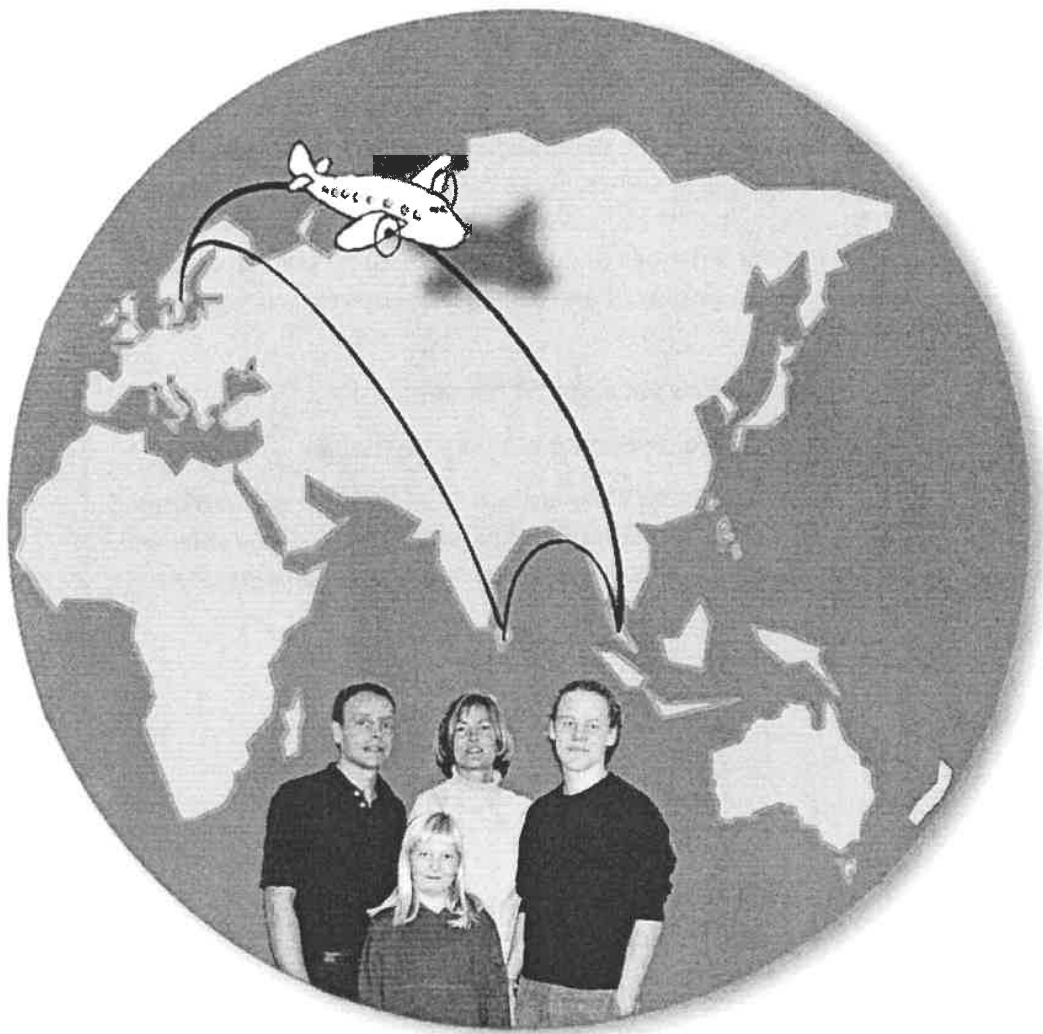
Birth date: Year \_\_\_\_\_ Month \_\_\_\_\_

Day \_\_\_\_\_

Girl ☐ Boy ☐

*All solutions and answers must be written on appropriate writing paper provided. The question paper must be handed in together with your solutions.*

# The Svenssons travel to Asia



The Svensson family consists of Mom, Dad,  
Jacob, 17 yr old and Linda, 8 yr old.

1.

Exchange rate in 2001  
1 bath = 0.20 SEK  
SEK means Swedish Crowns

Jacob withdraws money from a cash machine in Thailand. He takes out 1 000 bath. How many crowns will be taken from his account in Sweden?

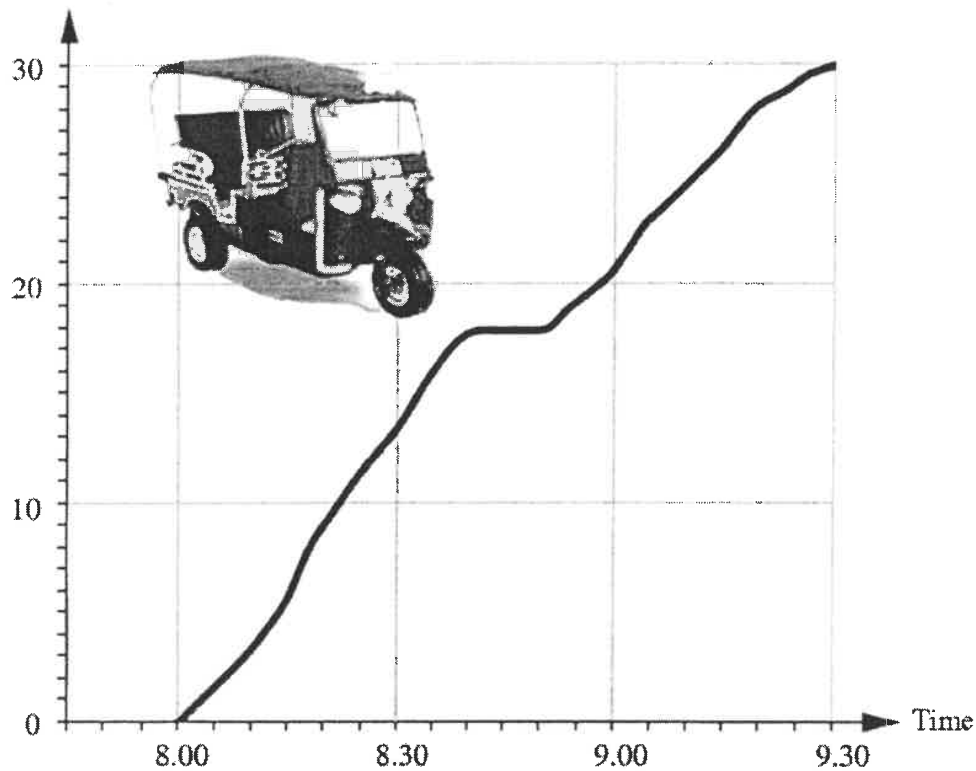
(2/0)

2. You have these bath bills (banknotes): two 100-s, two 50-s and three 20-s. What amounts from 200 to 300 bath can you pay exactly without change using these bills?

(2/0)



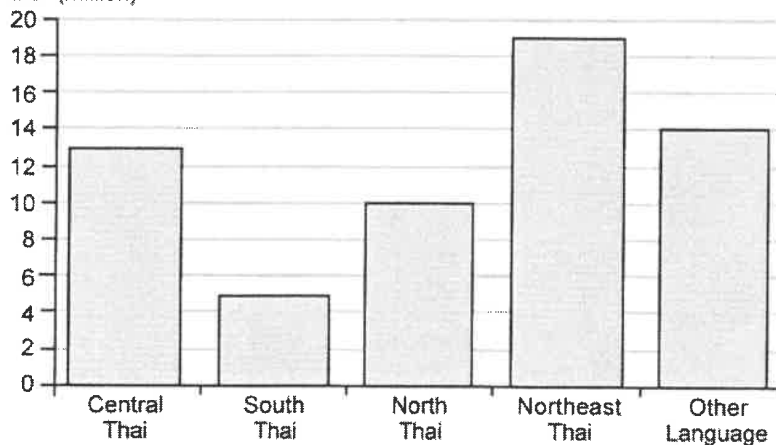
3. Distance (km)



Jacob rents a tuk-tuk-taxi to have a look around Bangkok. His tour is shown in the diagram above.

- Find the average speed of the taxi for this trip. (1/1)
- What do you think happened between 8.40 and 8.50? (1/0)

4. Number (million)



In Thailand most people speak various dialects of Thai. Central Thai is the official language and is used in all schools in the country. What percentage of the population speaks Central Thai according to the diagram?

(2/1)

5. **Chicken à la Gobi**

3 portions

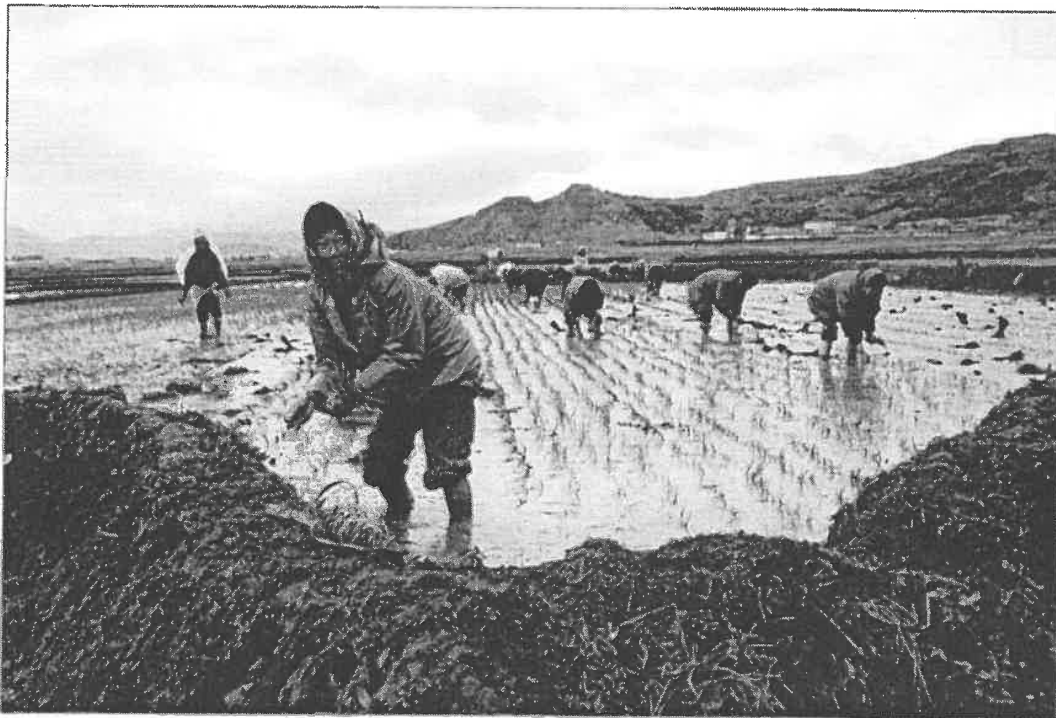
**Ingredients:**

450 g chicken filé	250 ml sweet and sour sauce
400 g wok vegetables	1 tsp minced ginger
3 tbsp peanut oil	1 tsp paprika powder
225 g bamboo shoots	2 pinches pepper
175 g sweet peas	2 pinches salt
1 minced garlic clove	



Source: Frukst & Grönt Främjandet

- a) How many portions can be made with 1.2 kg chicken filé, according to the recipe? (2/0)
- b) Jacob adjusts the recipe so that there will be enough for 10 people. Is one bottle, containing 6 dl of sweet and sour sauce, enough? Explain your reasoning. (1/0)



Source: Gerald Bourke/Pressens bild

6. Rice plants must be planted and grow in fields that are covered with water. How many cubic meters of water must be supplied to water a rice field that is 0.6 hectares in area if you wish to raise the water level by 15 cm? (1 hectare = 10 000 square meters) (0/2)

7. The Svenssons buy air tickets from Bangkok to Colombo on Sri Lanka. Altogether the tickets cost 6 305 SEK. Jacob, 17 yr old, gets a 25 % discount and Linda, 8 yr old, travels for half price. The parents pay full price. How much does *one ticket for one parent* cost?

(1/2) □



8. *Facts about Sri Lanka*  
Population on January 1, 2001: 19.4 million  
Population growth/yr: 1.4 %  
Inhabitants/km<sup>2</sup>: 295

*Facts about Sweden*  
Population on January 1, 2001: 8.9 million  
Area: 450 000 km<sup>2</sup>

How many more inhabitants per square kilometre were there in Sri Lanka than in Sweden on January 1, 2001?

(2/0)

9. The village Dompe has 2 500 inhabitants and this population increases by 125 persons per year. The village Urapola has 5 300 inhabitants and this population decreases by 75 persons per year. How many years will it take until the two villages have the same number of inhabitants? Explain your reasoning and calculations.

(1/2) □

10. In a village in Sri Lanka there is a rotating merry-go-round pulled by a water buffalo. The buffalo pulls a wooden pole that is hinged at the middle to a fixed post. At the outer end of the pole there is a carriage in which the children ride. The figure shows how it looks from above.



Linda is having a ride in the carriage. How far has the buffalo walked when Linda has ridden 20 m?

(1/2) □

