

MATHEMATICS TEST

Year 9 – Part B2

This part of the test contains one major problem, which you have 50 minutes to solve.

It is very important that you clearly show how you have solved the problem.

Under the problem you will find a square with a description regarding what your teacher will take into account when assessing your work. The maximum mark your solution can receive are 6 g-points and 7 vg-points. The item marked with α give you a possibility to show MVG-quality.

Tools: Calculator, ruler.

Name: _____

School: _____ Class: _____

Date of birth: Year _____ Month _____

Day _____

Girl ☐ Boy ☐

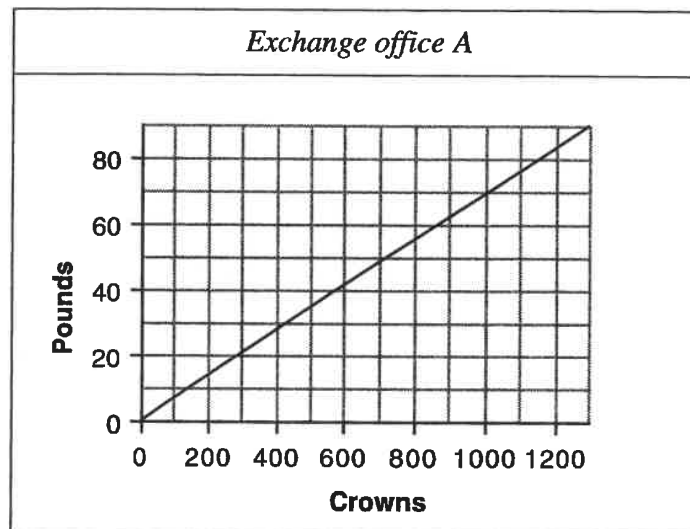
All calculations and answers should be written on paper that is handed in at the end of the test. The test packet must be handed in with your solutions.

Part B2

Currency exchange

When you exchange money for another currency the exchange office charges for the service. Some exchange offices charge the cost by giving a lower rate of exchange while others have an exchange cost.

You are to exchange Swedish crowns (SEK) to British pounds (£) and want of course to get as many pounds as possible. You compare three different exchange offices with each other.



<i>Exchange office B</i>
100 SEK = £ 7.7
Exchange cost 5 % of the paid amount.

<i>Exchange office C</i>
100 SEK = £ 8.6
Exchange cost £ 5 per exchange occasion.

- You have 500 crowns. They are to be exchanged to pounds. What exchange office gives you most pounds? Show your calculations.
- Is this exchange office always the best, independently of how much money you are to exchange? Investigate when one ought to exchange at the different offices.

(6/7) ✎

At the assessment of your work the teacher will consider

- what mathematical knowledge you have shown
- how well you have accounted for your work and carried through your calculations
- how well you have motivated your conclusions.