

SUBJECT TEST

Mathematics

GRADE

9

This test will be re-used and is therefore protected by **Chapter 17** paragraph 4 of the **Official Secrets Act (2009:400)**. The intention is for this test to be re-used until **2016-06-30**. This should be considered when determining the applicability of the Official Secrets Act.

Spring 2010

Part A – Oral Part

The Oral Parts for the Students

Name

Discussion questions for version I–III

Version I – Language choice in compulsory school

- A. Can we say that the number of boys that study modern languages has increased?
- B. Is it reasonable to claim that pupils rather choose Spanish than German?
- C. Can you use the diagram to say anything for the coming years?

Use the table below when you answer discussion questions D and E.

- D. Where there more boys or girls that studied German during the school year 98/99?
- E. *The proportion* of boys who studied French changed somewhat over the period shown. Were there *more* boys that studied French in 98/99 than in 07/08?

Number of pupils in Grade 9

<i>School year</i>	<i>Number of girls</i>	<i>Number of boys</i>
98/99	44 500	47 300
01/02	49 600	52 400
04/05	56 300	59 700
07/08	59 600	63 200

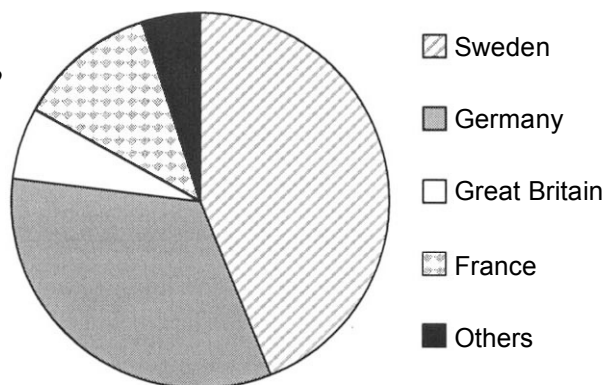
Source: Statistics Sweden

Version II – Access to Internet at home

- A. Which age group has had the greatest increase in access to Internet over the time period?
- B. From the two diagrams can you draw the conclusion that in 2007 the same number of men and women were questioned in the age group 75+?
- C. What can be said about coming years, based on the diagrams? Explain.
- D. Based on the diagram can we say that in 2003 the number of persons who had access to Internet in the age group 25-34 was twice as big as for the age group 65-74?

Version III – Cars from different countries

- A. Are there some new car-manufacturing countries that have appeared over the time period? How can you see that?
- B. From what car-manufacturing country have most of the newly registered cars in Sweden come during the time period?
- C. What advantages and disadvantages does the diagram have?
- D. The pie chart shows the distribution for a particular year. Which year? How can you see that?



Information for pupils

This is a description of the oral section of the national examination. This oral section is to be carried out in groups consisting of 3–4 pupils who sit together with the teacher around a table.

- Each pupil gets a paper with diagrams and a paper with certain claims. These claims may be true or false. You will have a few minutes to study these. Your teacher will tell you in what order you should report your answers.
- Each of you will report about some of the claims to the others in the group. With the help of the diagram you should explain how you have decided whether the claim is true or false, and defend your answer. After each report your fellow-pupils may ask questions, make further comments and argue for or against your view.
- When everyone has reported on his/her claims the group will discuss some questions that the teacher gives you.
- Your performance and contributions during the oral examination will be assessed with respect to the following aspects:

Understanding

To what extent you show that you have understood the task, the concepts involved and the relationships between these.

Language

How clear your report explanation is and how well you use mathematical language.

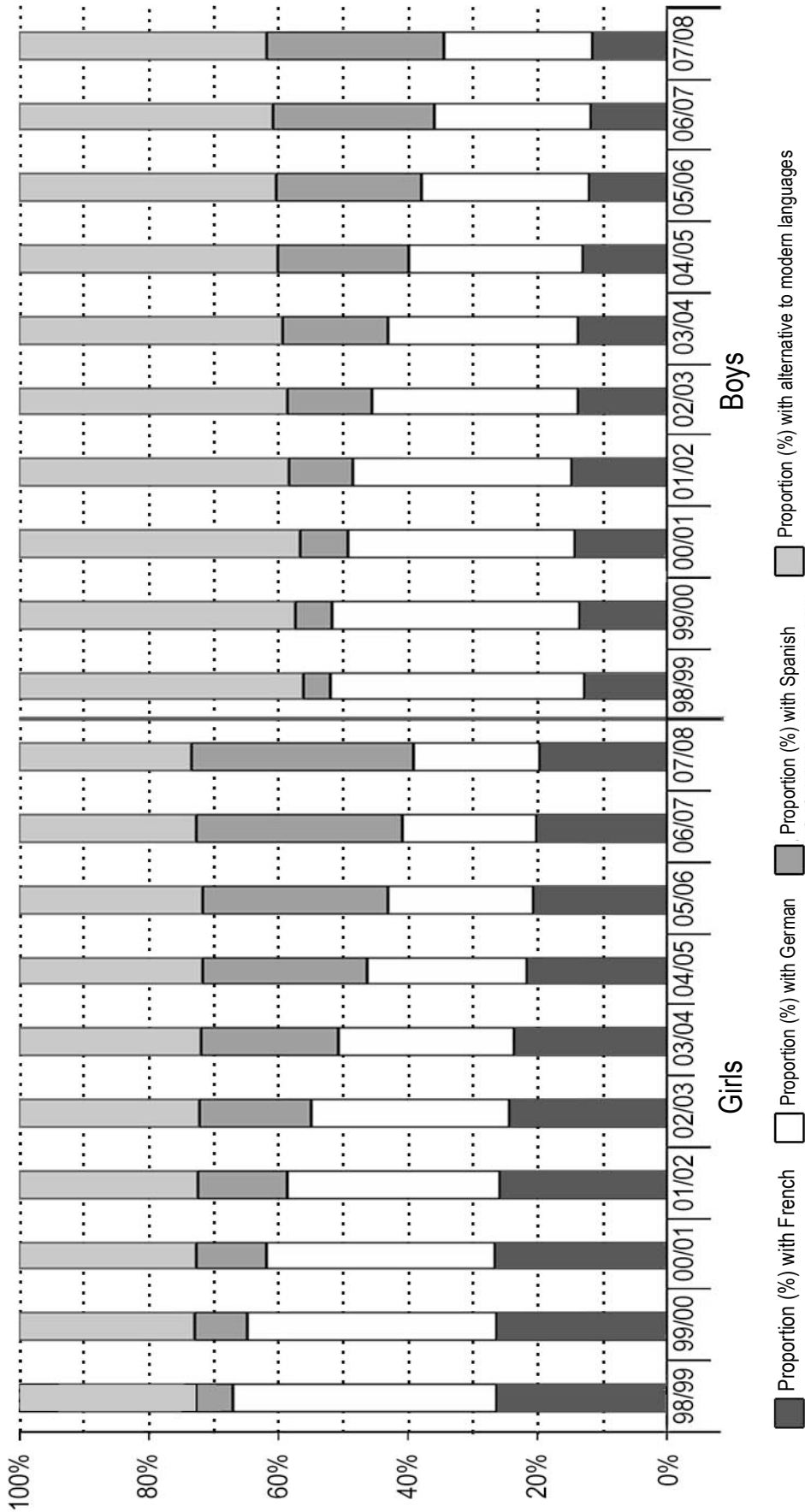
Participation

To what extent you take part in the discussion, can defend your thoughts and ideas and make responses to the explanations of other pupils.

Remember that you have opportunity to show your knowledge in your own reporting, in the discussion after the reports of other pupils and in the following discussion. Your performance in this exam section is compiled and given a number of g- and vg-points. You may also demonstrate the MVG-qualities stated in the MVG-table (see earlier exams and assessment instructions www.prim-gruppen.se). The result on this oral examination is then combined with the results on exam Section B and Section C.

Version I – Language choice in compulsory school

Proportion (%) of pupils in Grade 9, according to sex, that study modern languages (French, German or Spanish) or alternatives to modern languages 1998/99–2007/08



Source: The Swedish National Agency for Education

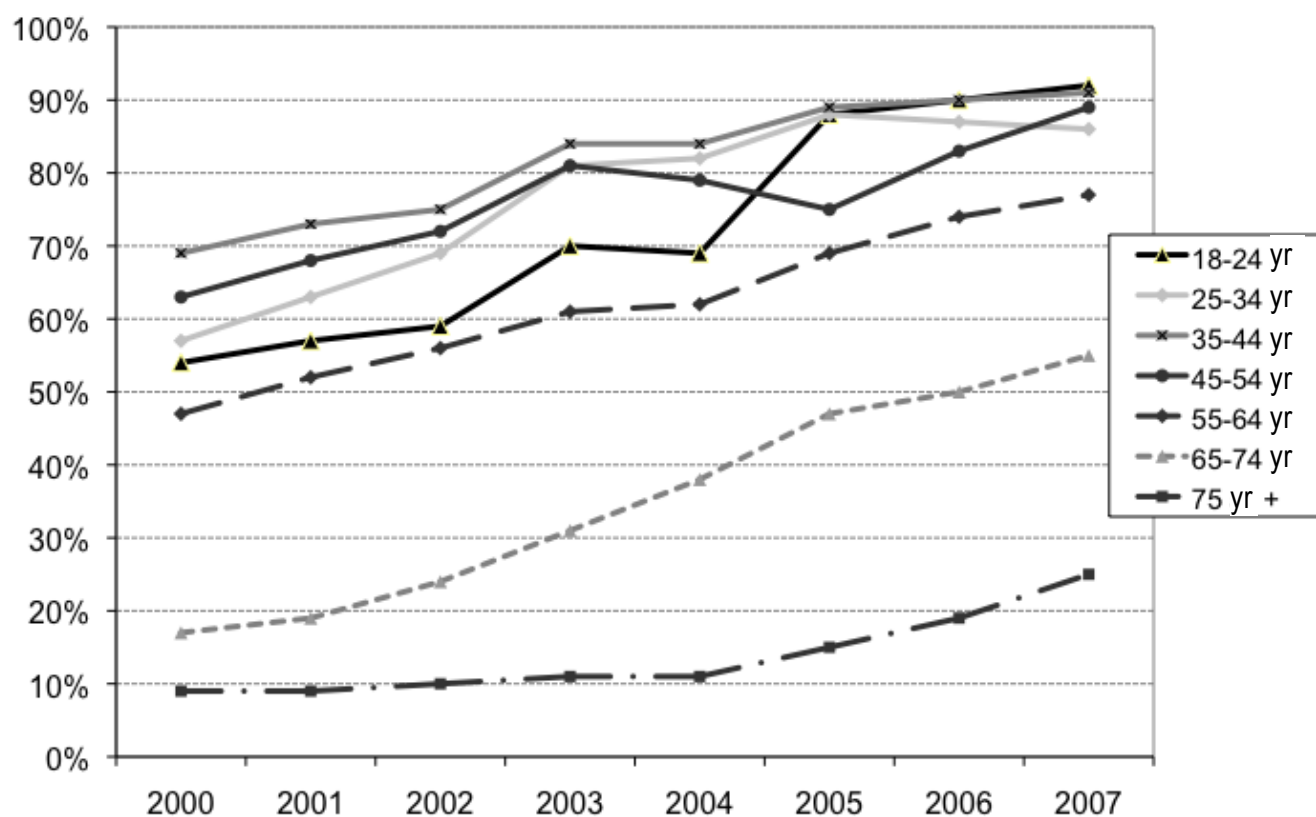
Version I – Language choice in compulsory school

The diagram shows that

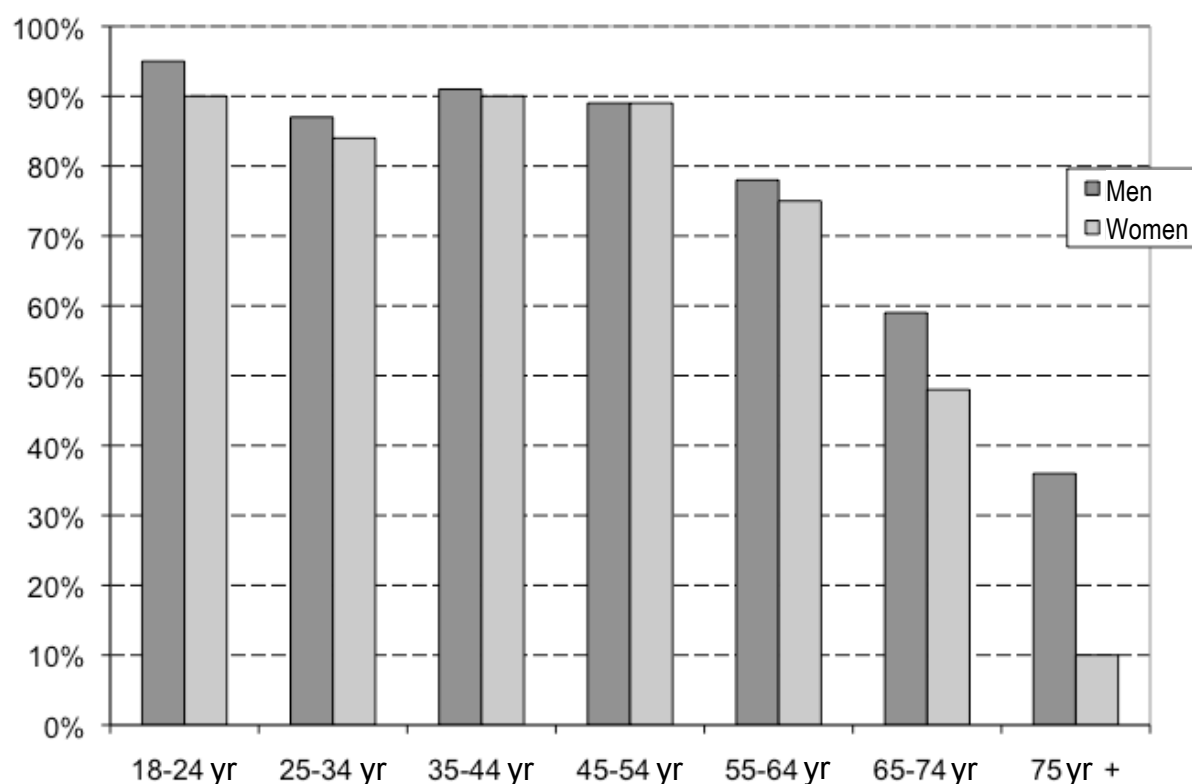
1. In the school year 06/07, 20 % of the girls studied French.
2. The *proportion* of boys who studied French was the same in the school year 07/08 as in 98/99.
3. About 40 % of the girls studied German in the school year 98/99.
4. The *proportion* of boys who study Spanish has grown four times bigger over the time period from 99/00 to 05/06.
5. In the school year 04/05 one third of the girls studied Spanish.
6. For the boys, twice as many studied German as compared to French in the school year 07/08.
7. Almost $\frac{2}{5}$ of the girls studied German in the school year 07/08.
8. French has decreased in popularity over the time period from 98/99 to 07/08.
9. Six times as many girls studied Spanish in 07/08 as compared with 98/99. ✕
10. In the school year 04/05 about 35 % of the pupils chose an alternative to modern languages. ✕
11. The *proportion* of boys that studied Spanish has increased by 300 % from 98/99 to 03/04. ✕
12. There were a little less than 10 % more girls than boys who studied modern languages during these years. ✕

Version II – Access to Internet at home

A selection of about 2 000 people in Sweden during the years 2000-2007 replied to some questions about Internet. The diagram below shows what proportion (%) in different age groups that had access to Internet in their homes.



The diagram below shows what proportion (%) of men and women respectively that had access to Internet at home in 2007.



Source: World Internet Institute

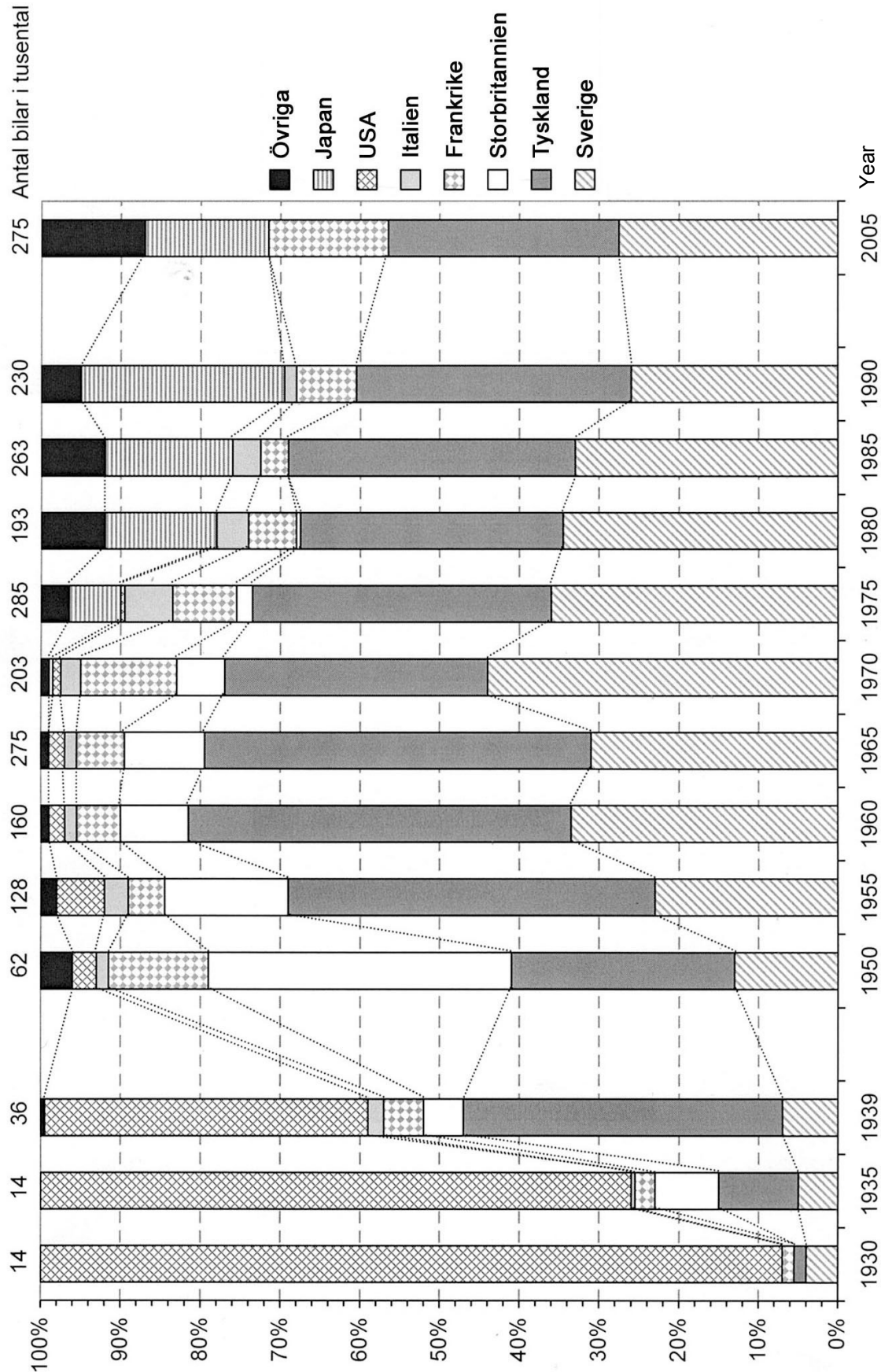
Version II – Access to Internet at home

The diagram shows that

1. In 2006 half of those in the age group 65–74 had access to Internet.
2. In 2004 more than 70 % of those in the age group 18–24 had access to Internet.
3. In 2007 every tenth woman 75 yr of age or older had access to Internet.
4. In 2007 the age group 18–24 yr was the group that had the greatest *proportion* with access to Internet.
5. In the age group 65–74 yr, the *proportion* with access to Internet doubled from 2002 to 2006.
6. In 2003 three fifths of those in the age group 45–54 yr had access to Internet.
7. In 2007 the *proportion* of women who had access to Internet was greater than the corresponding *proportion* of men.
8. Younger persons have greater access to Internet than older persons.
9. Access to Internet increased by about 20 percentage points in the age group 35–44 yr during the period 2000–2007.
10. In 2007 the *proportion* of women with access to Internet was 80 % lower for the age group 75 yr + compared to the age group 45–54 yr. ✕
11. The *proportion* with access to Internet in the age group 65–74 yr has increased by about 300 % during the period 2000–2007. ✕
12. Access to Internet increased more in the age group 75 yr + than in the age group 18–24 yr during the period 2000–2007. ✕
13. In 2007 the *proportion* of Swedes that *did not have access* to Internet was 10 %. ✕

Version III – Cars from different countries

Newly registered cars in Sweden 1930–2005 distributed according to different manufacturing countries (proportion in %)



Source: Bilismen i Sverige

Version III – Cars from different countries

The diagram shows that

1. In 1930 there were 14 000 newly registered cars.
2. The same number of cars were newly registered in 1965 as in 2005.
3. In 1965 a little more than 30 % of the newly registered cars were Swedish-made.
4. In 1955 almost 70 % of the newly registered cars were German-made.
5. In 2005 none of the newly registered cars were made in the USA or Great Britain.
6. In 1980 the same number of Swedish- and German-made cars were newly registered.
7. In 1950 one fifth of the newly registered cars were made in Great Britain.
8. More Swedish-made cars were newly registered in 1980 than in 1985.
9. In 1960 about 80 000 German-made cars were newly registered.
10. Half as many French-made cars were newly registered in 1960 as compared with 1950. ✕
11. The total *number* of newly registered cars increased by about 360 % from 1950 to 1975. ✕
12. The *number* of newly registered Swedish-made cars increased by 100 % from 1950 to 1955. ✕
13. The *proportion* of newly registered Swedish-made cars increased by 10 % from 1965 to 1970. ✕

