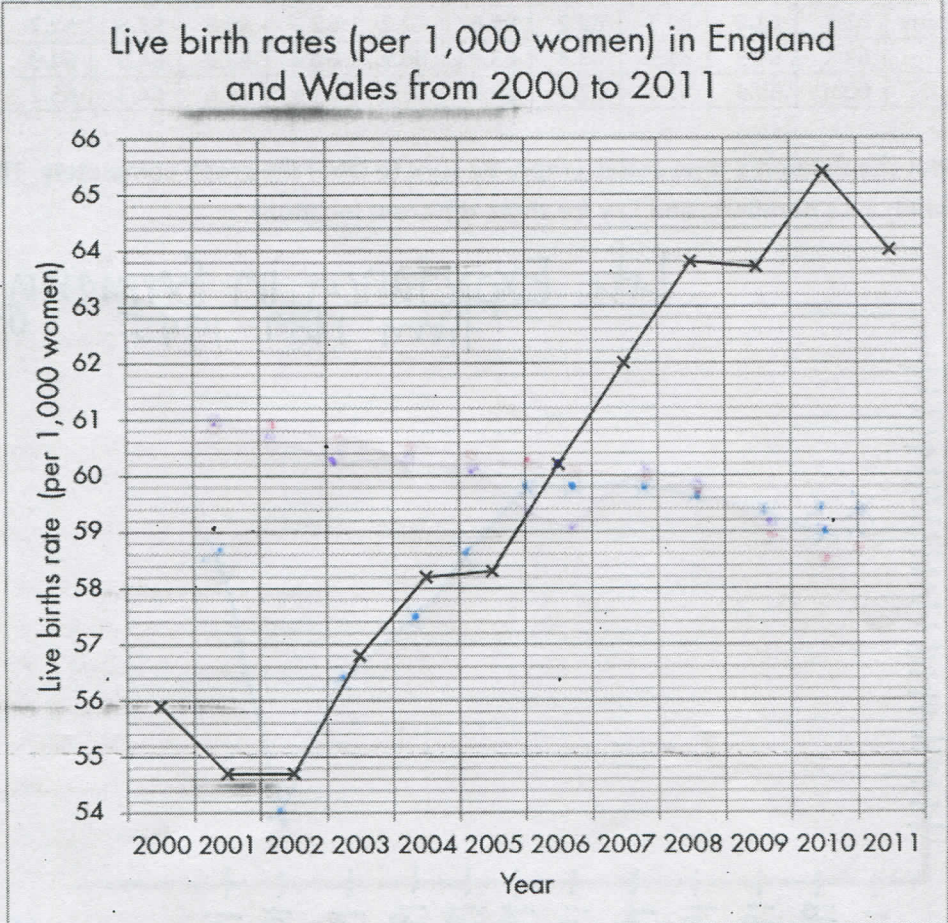


2.2 Time Series Graph Worksheet



Data source: [www.ons.gov.uk](http://www.ons.gov.uk) - Birth summary tables, England and Wales 2011 (final).

The time series graph above shows the live birth rates (per 1,000 women) in England and Wales from 2000 to 2011. Use the graph to answer the following questions:

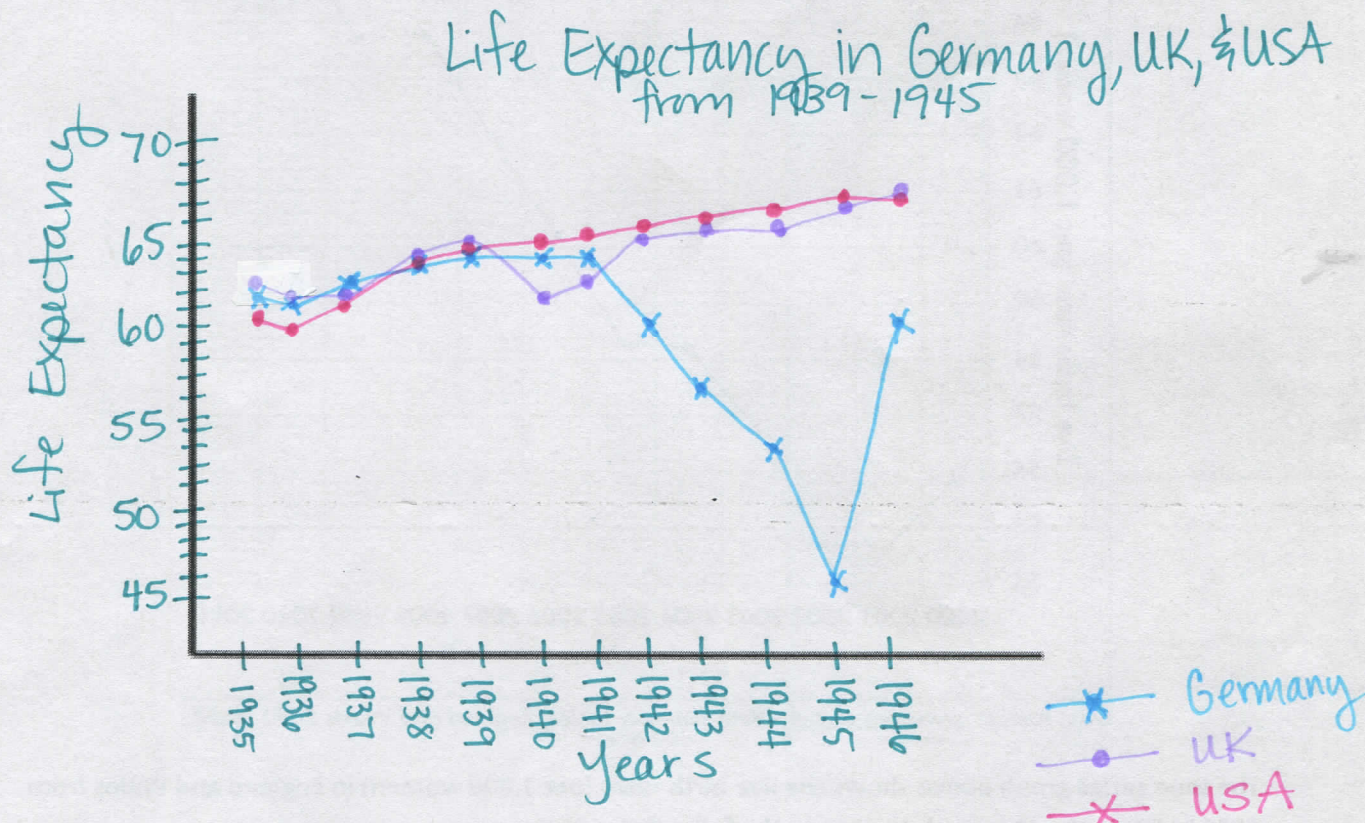
1. What was the live birth rate in 2006? 60.2 per 1,000 women
2. In which year was the live birth rate 63.7? 2008
3. How much did the live birth rate increase by between 2003 and 2006? 3.4 per 1,000 women  
56.8 → 60.2
4. What was the difference in birth rate between the years 2010 and 2000? 9.5 per 1,000 women  
65.4 55.9
5. What was the average birth rate for the years 2002 to 2004?  
 $(54.7 + 58.2) / (2) = \frac{112.9}{2} = 56.45$  per 1,000 women
6. What was the average birth rate for the years 2005 to 2008?  
 $(58.3 + 63.8) / 2 = \frac{122.1}{2} = 61.05$  per 1,000 women



The Second World War was between 1939 and 1945. The table below shows information about the life expectancy in Germany, UK, and USA between 1935 and 1946.

	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Germany	61.5	61.0	62.1	62.2	62.6	62.2	62.2	59.6	57.8	52.7	46.1	60.2
UK	62.1	61.9	61.9	63.3	63.7	60.9	61.4	63.9	64.0	64.9	65.9	66.5
USA	60.9	60.4	61.1	62.4	63.1	63.2	63.8	64.6	64.3	65.1	65.6	66.3

- a) Plot the data on a time-series graph. Be sure to label the graph completely. Title, axes label, axes numbers, and key for three different locations.



- b) Write down three conclusions about the information shown on your graph.

- i. USA started as the worst and was 2nd in the end, but the best for majority of the covered time frame.
- ii. Germany had a drastic decline from 1944-1945 but had the biggest spike from 1945-1946.
- iii. The UK varied the least. They were pretty consistent with a range of 60.9-66.5 with a difference of only 5.6.

Answers may vary