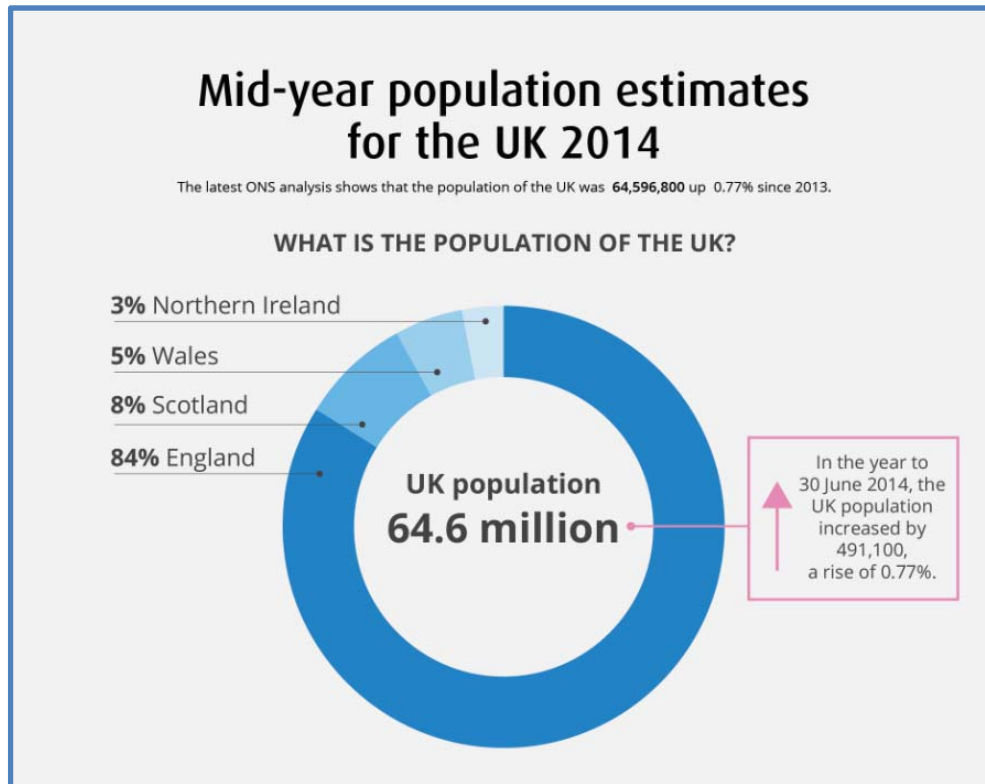


# Interpreting Infographics - UK Population data

Name \_\_\_\_\_ Date \_\_\_\_\_

**You must show all your working out – even if you use a calculator.**

Source: <http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/mid-2014/mid-year-population-estimates-for-the-uk-2014.html>



1. What was the population of the UK on June 30 2014?  
Give your answers in numbers (i) and in words (ii).

a) Rounded to the nearest hundred

i.

ii.

b) Rounded to the nearest hundred thousand

i.

ii.

2. Use subtraction to calculate the best estimate of the UK population on 30 June 2013.

3. Using the most accurate figure available on the infographic, calculate the population of each country on 30 June 2014.

Then show how you have checked that your four answers are correct.

a) Northern Ireland

c) Scotland

b) Wales

d) England

# Interpreting Infographics - UK Population data

Name \_\_\_\_\_ Date \_\_\_\_\_

**You must show all your working out – even if you use a calculator.**

Source: <http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/mid-2014/mid-year-population-estimates-for-the-uk-2014.html>



In the year to June 30 2014 the UK population increased by 491,100 (see previous chart).

4. Write down the calculations that have been used to calculate the following statistics:

a) Natural change of 226,000

b) Net international migration of 259,700

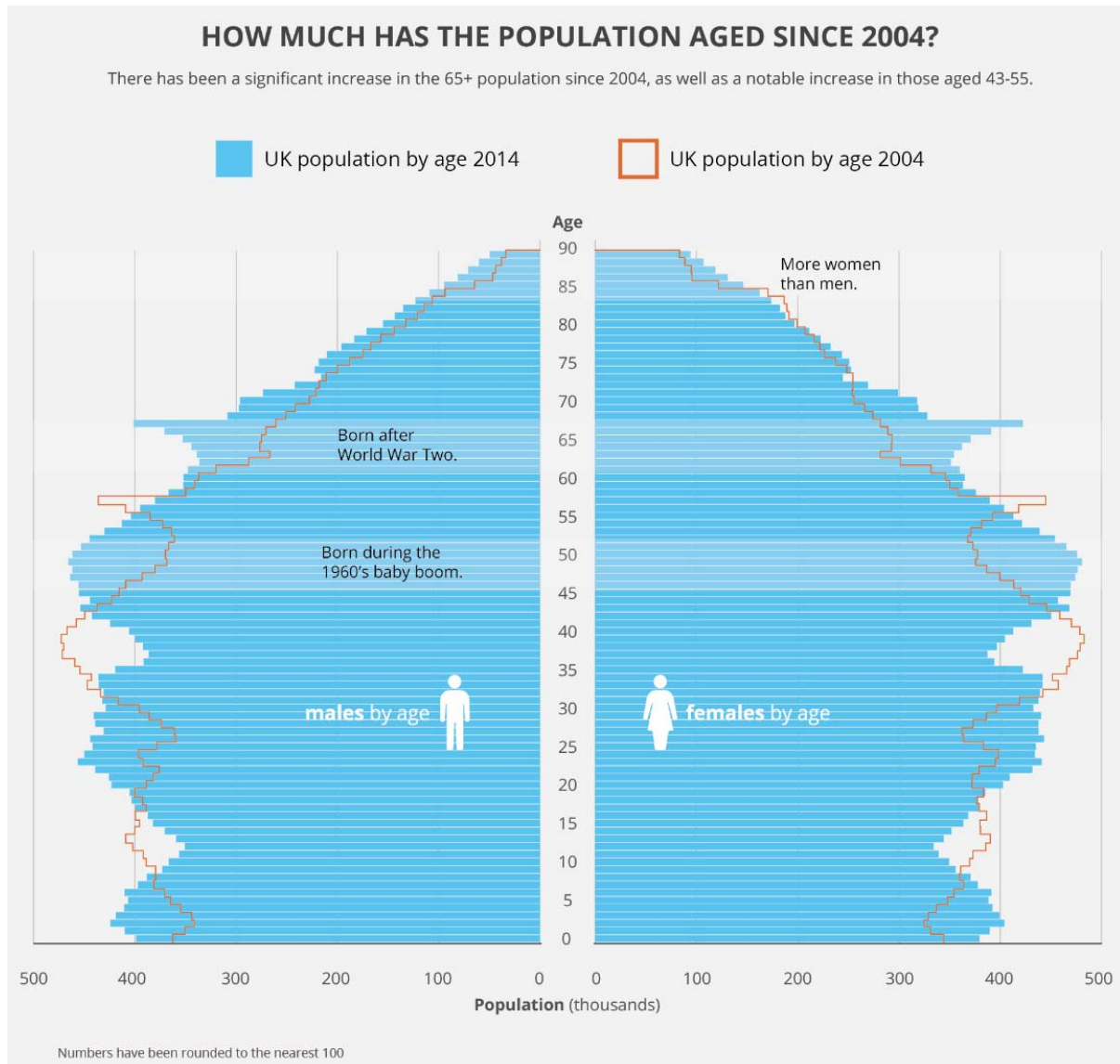
5a) Complete the chart below.

	Number of people
Increase due to international migration	
Increase due to natural change	226,200
Increase due to other adjustments	
Total increase*	

5b) Explain why the total increase\* is not exactly 491,100?

**You must show all your working out – even if you use a calculator.**

Source: <http://www.ons.gov.uk/ons/re/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/mid-2014/mid-year-population-estimates-for-the-uk-2014.html>



6. Use the chart to estimate answers to the following questions.

TIP. A ruler might be useful – or to see the chart in more detail visit the Office of National Statistics link (above) and zoom in to the infographic

- a) The number of men in the UK in 2014 aged 90.
- b) The number of women in the UK in 2004 aged 90.

7. Write a sentence comparing the numbers of baby boys and baby girls (under the age of 1) in the UK in 2014.

**FUNCTIONAL MATHEMATICS Coverage and Range statements (indicative only)**

Coverage and range statements provide an indication of the type of mathematical content candidates are expected to apply in functional contexts. Relevant content can also be drawn from equivalent National Curriculum levels and the Adult Numeracy standards.

✓ indicates the main coverage and range skills covered in this resource, although these may vary with the student group and how the resource is used by the teacher.

**Level 1**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>a) Understand and use whole numbers and understand negative nos. in practical contexts</li> <li>b) Add, subtract, multiply and divide whole numbers using a range of strategies</li> <li>c) Understand and use equivalences between common fractions, decimals and percentages ✓</li> <li>d) Add and subtract decimals up to 2 decimal places</li> <li>e) Solve simple problems involving ratio, where one number is a multiple of the other</li> <li>f) Use simple formulae expressed in words for one- or two-step operations</li> </ul> | <ul style="list-style-type: none"> <li>g) Solve problems requiring calculation, with common measures, including money, time, length, weight, capacity and temperature</li> <li>h) Convert units of measure in the same system</li> <li>i) Work out areas and perimeters in practical situations</li> <li>j) Construct geometric diagrams, models and shapes</li> <li>k) Extract and interpret information from tables, diagrams, charts and graphs ✓</li> <li>l) Collect and record discrete data and organise and represent information in different ways</li> <li>m) Find mean and range</li> <li>n) Use data to assess the likelihood of an outcome</li> </ul> |
|---|---|

**Level 2**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>a) understand and use positive and negative numbers of any size in practical contexts ✓</li> <li>b) carry out calculations with numbers of any size in practical contexts, to a given number of decimal places ✓</li> <li>c) understand, use and calculate ratio and proportion, including problems involving scale</li> <li>d) understand and use equivalences between fractions, decimals and percentages ✓</li> <li>e) understand and use simple formulae and equations involving one or two operations</li> <li>f) recognise and use 2D representations of 3D objects</li> </ul> | <ul style="list-style-type: none"> <li>g) find area, perimeter and volume of common shapes</li> <li>h) use, convert and calculate using metric and, where appropriate, imperial measures</li> <li>i) collect and represent discrete and continuous data, using information and communication technology (ICT) where appropriate</li> <li>j) use and interpret statistical measures, tables and diagrams, for discrete and continuous data, using ICT where appropriate. ✓</li> <li>k) use statistical methods to investigate situations ✓</li> <li>l) use probability to assess the likelihood of an outcome</li> </ul> |
|---|---|

**References**

Ofqual (2009), *Functional Skills criteria for Mathematics: Entry 1, Entry 2, Entry 3, level 1 and level 2.*

<http://www.ofqual.gov.uk/>

This resource also covers many **adult numeracy curriculum** elements.

For related resources and further curriculum links please visit the download page for this resource at

[www.skillsworkshop.org](http://www.skillsworkshop.org)

## Interpreting Infographics - UK Population data

### Answers and curriculum mapping

- 1a) i. 64,596,800  
ii. Sixty four million, five hundred and ninety six thousand, eight hundred
- 1b) i. 64,600,00  
ii. Sixty four million, six hundred thousand
2.  $64,596,800 - 491,100 = 64,105,700$  (accept  $64,600,000 - 491,100 = 64,108,900$ )
3. 1% of 64,596,800 = 645,968.  
Use this (or any other efficient method) to calculate the answers as follows.
- a) Northern Ireland  $3 \times 645,968 = 1,937,904$   
b) Wales  $5 \times 645,968 = 3,229,840$   
c) Scotland  $8 \times 645,968 = 5,167,744$   
d) England  $84 \times 645,968 = 54,261,312$  (or subtract the sum of answers a b & c from 64,596,800)

To check, add up all 4 answers. They will total 64,596,800 if correct.

- 4a) Births (777400) minus deaths (551200) = natural change (226,200).  $777400 - 551200 = 226,200$   
4b) Immigration (582,600) minus emigration (322,900) = net international migration (259,700)  
 $582,600 - 322,900 = 259,700$

5a) Complete the chart below.

	Number of people
Increase due to international migration	259,700
Increase due to natural change	226,200
Increase due to other adjustments (1% of 491,100)	4,911
Total increase*	490,811

5b) Explain why the total increase\* is not exactly 491,100? The 1% (4,911) is calculated from a figure (491,100) that has already been rounded.

6. Use the chart to estimate answers to the following questions.

*TIP. A ruler might be useful – or visit the Office of National Statistics link (above) and zoom in to the infographic to see more detail.*

- a) The number of men in the UK in 2014 aged 90. **Approximately 50 000.**  
b) The number of women in the UK in **2004** aged 90. **Approximately 80 000.**

7. Write a sentence comparing the numbers of baby boys and baby girls (under the age of 1) in the UK in 2014.

**In 2014, there were more boys under the age of one year than there were girls. The number of boys was approximately 400,000 compared to approximately 380,000 girls.**