

## Maths Audit: Interviews for 2016/17

The aim of the audit is to gain information regarding each candidate's initial subject knowledge, as required to teach primary pupils. The results will be used as part of the selection process and as a diagnostic tool to enable successful candidates to be given support and advice about developing subject knowledge before the course begins. This serves a different purpose from the Skills Test that all applicants to ITT are required to take. Candidates for both the FS/KS1 and KS1/KS2 training programmes will be expected to demonstrate a high level of competence in this audit. The interview audit will include a one hour written paper asking candidates to answer questions relating to:

### Number and place value

For example:

- understanding place value e.g. the value of the underlined digit in 356.25 is two tenths
- ordering and rounding numbers
- completing simple sequences of numbers

### Addition, subtraction, multiplication and division

For example:

- mental strategies and written methods to add, subtract, multiply and divide numbers  
*e.g.  $30 \times 29$ ;  $2400$  divided by  $40$ ,  $1796$  divided by  $63$ ,  $176 \times 123$*
- understanding and applying the terminology multiples, factors, square numbers, prime numbers *eg name the factors of 24, give a multiple of 24; identify the first 4 prime numbers*

### Fractions, decimals, percentages, ratio and proportion

For example:

- fractions of whole numbers, *e.g.  $1/6$  of 330*
- adding, subtracting, multiplying and dividing fractions  
*e.g.  $1/2 + 1/5$     $3/4 - 1/4$     $1/3 \div 2$     $1/2 \times 1/3$*
- equivalence of fractions,
- percentages of whole numbers *e.g. 35% of 320*
- identifying simple ratios and proportions (*e.g. if there are 15 red roses and 5 white roses what is the ratio of red to white roses. What proportion of the roses are red?*)
- mentally solving simple problems involving percentages *e.g. 17.5% of 300*
- putting decimal fractions in order of size *e.g. 0.2, 0.16, 0.067*
- converting decimal numbers to percentages and fractions  
*(e.g. state 0.4 as a percentage and fraction)*

### Algebra

For example

$$5x/20=1 \quad x = ? \quad y + 20 = 34 - y \quad y = ? \quad 40 \div 2a = 5 \quad a = ?$$

### Measurement and geometry

For example:

- knowledge and ability to draw nets of simple 3D shapes
- knowledge of terminology including:
  - acute, obtuse and right angles
  - a mathematical definition of regular polygons
- ability to work out the area and perimeter of compound shapes made out of rectangles
- knowledge of positive and negative co-ordinates  
*eg correctly plot on a 4 quadrant graph the co-ordinates (3, -5) (2,2) (-1,6) and (-2, -2)*

## Statistics

For example:

- using and interpreting information on line graphs
- demonstrating an ability to draw pie charts of simple data (*eg draw a pie chart representing 24 pupils if 12 have brown eyes, 3 have green eyes and 9 have blue eyes*)

Candidates are advised to ensure they understand and can complete the examples given above correctly.

Candidates may also like to use the **2016 KS2 sample maths SAT tests** to revise and test their knowledge for this audit (the questions get progressively more difficult through the sample SAT test). The sample papers give a good indication of the level of subject knowledge required of primary school teachers to teach able KS2 pupils. See:

[http://www.satspapers.org.uk/Page.aspx?TId=5#MATHS\\_SATS\\_3\\_5](http://www.satspapers.org.uk/Page.aspx?TId=5#MATHS_SATS_3_5)

The Maths Dictionary for Kids website may also be useful, particularly for revising geometry terminology. See:

<http://www.amathsdictionaryforkids.com/>

It is not expected that in the interview audit candidates will be secure in all areas. However, it is important candidates are competent and confident at this level in many areas, as able Year 6 pupils are able to score over 90% on the SCITT audit paper set.

Significant gaps in mathematical subject knowledge will prevent candidates being called to second interview, as this could make it difficult to achieve the QTS standards in a one year course. **You are advised to revise your understanding of mathematics using the information supplied above before arriving for interview.** No calculators will be permitted when undertaking the audit.