## Spring Test 3

Teacher guidance

## Skills and knowledge needed for this test:

- Addition and subtraction of two numbers with more than four digits
- Addition and subtraction of whole numbers and mixed decimals
- Addition and subtraction of fractions with multiples of the same denominator
- Complements of 1
- Square and cube numbers
- Multiplication and division of whole numbers and decimals by 10,100 and 1000
- Formal written method for short multiplication and short division with remainders
- Formal written method for long multiplication and long division by a two-digit number
- Multiplication of pairs of simple fractions
- Finding fractions of amounts
- Missing number calculations, including balanced calculations, with all four operations
- Calculations with brackets


## New: Multiplication and division of decimals to three decimal places by 10,100 or 1000

## A teaching suggestion

Step 1
Tell the children that they are going to learn about multiplication and division of numbers by 10,100 and 1000 . It is helpful to have a decimal point in a fixed position and digit cards that can be moved to illustrate the method.
step 2
Agree that, when multiplying by 10,100 and 1000 , the digits in the number move to the left, as the answer is bigger than the original number. When dividing by 10,100 and 1000 , the digits in the number move to the right to give an answer that is smaller than the original number.

Step 3 Display $1346 \div 1000$. Establish that the number will become 1000 times smaller. This means that the digits in the number move three columns to the right.
Move $1=134.6$ Move $2=13.46$ Move $3=1.346$
Th HTO.thth becomes Th HTO.thth 1346
1.346
tep 4
Display $5.6 \div 100$. Establish that there are two moves and the division sign means the digits move to the right to make the number smaller.
Move $1=0.56$ Move $2=0.056$
Th HTO.thth becomes Th HTO.t hth $5.6 \quad 0.056$
tep 5
Complete lots of examples with the children, and then allow them to work with a partner to complete similar examples before trying the work independently.

| Question number | Question | Answer | Marks | Related test |
| :---: | :---: | :---: | :---: | :---: |
| 1 | $1^{2}=\square$ | 1 | 1 | Y5 Autumn Test 4 |
| 2 | $0.1=\square-0.9$ | 1 | 1 | Y5 Summer Test 4 |
| 3 | $\square \times 12=108$ | 9 | 1 | $\begin{array}{\|l\|l\|} \hline \text { Y4 Autumn Test 3, } \\ \text { Y4 Summer Test 2 } \\ \hline \end{array}$ |
| 4 | $900 \times \square=90000$ | 100 | 1 | Y5 Autumn Test 5, |
| 5 | $144=\square^{2}$ | 12 | 1 | Y5 Autumn Test 4 |
| 6 | $3408 \div 9=\square$ | 378 r 6 | 1 | Y5 Autumn Test 6 |
| 7 | $\square=2176 \times 6$ | 13056 | 1 | Y5 Spring Test 3 |
| 8 | $\frac{1}{6}+\frac{5}{12}=\square$ | $\frac{7}{12}$ (or equiv) | 1 | Y5 Spring Test 6 |
| 9 | $13+15=\square \times 4$ | 7 | 1 | Y6 Autumn Test 4 |
| 10 | $9.8165 \times 100=\square$ | 981.65 | 1 | Y6 Spring Test 3 |
| 11 | $\frac{15}{10}+\frac{4}{5}=\square$ | $2 \frac{3}{10}$ (or equiv) | 1 | Y6 Autumn Test 2 |
| 12 | $\square=\frac{3}{8}$ of 40 | 15 | 1 | Y6 Autumn Test 3 |
| 13 | $\frac{1}{5} \times \frac{1}{3}=\square$ | $\frac{1}{15}$ (or equiv) | 1 | Y6 Spring Test 2 |
| 14 | $4^{3}=\square$ | 64 | 1 | Y5 Spring Test 1 |
| 15 | $139.652 \div 10=\square$ | 13.9652 | 1 | Y6 Spring Test 3 |
| 16 | $9004-5119=\square$ | 3885 | 1 | Y5 Autumn Test 3 |
| 17 | $8574 \div 6=\square$ | 1429 | 1 | Y5 Spring Test 5 |
| 18 | $\square=4 \times(10-5)$ | 20 | 1 | Y6 Spring Test 1 |
| 19 | $\frac{1}{6} \times \frac{1}{2}=\square$ | $\frac{1}{12}$ (or equiv) | 1 | Y6 Spring Test 2 |
| 20 | $600-\square=162$ | 438 | 1 | Y5 Autumn Test 3, Y3 Autun Test 1 |
| 21 | $7458+29815+67=\square$ | 37340 | 1 | Y5 Spring Test 4 |
| 22 | $35.92-6.741=\square$ | 29.179 | 1 | Y6 Autumn Test 5 |
| 23 | (30-19) $\times 8=\square$ | 88 | 1 | Y6 Spring Test 1 |
| 24 | $4 \times \square=7132$ | 1783 | 1 | Y5 Spring Test 5 , <br> Y4 Aritun Test |
| 25 | $\square \div 8=632$ | 5056 | 1 | Y5 Spring Test 3 , Y4 Autumn Test |
| 26 | $71.7=\square-8.351$ | 80.051 | 1 | Y6 Autumn Test 5, Y3 Autumn Test 1 |
| 27 | $8531 \div 19=\square$ | 449 | $2 *$ | Y6 Autumn Test 6 |
| 28 | $483 \times 37=\square$ | 17871 | $2^{*}$ | Y6 Autumn Test 1 |
| Total marks |  |  | 30 |  |

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[^0]:    * award 1 mark if there is one error in the working

