## Spring Test 1

## Teacher guidance

## Skills and knowledge covered in this test:

- Calculate intervals across zero [6N5]
- Add and subtract numbers greater than 4 digits [5C2]
- Recognise and use the notation for squared and cubed [5C5d]
- Multiply multi-digit numbers up to 4 digits by up to 2-digit numbers using long or short multiplication [6C7a]
- Divide numbers up to 4 digits by a 2-digit number using long or short division, including with remainders [6C7b], [6C7c]
- Solve problems involving addition, subtraction, multiplication and division [6C8]
- Use the order of operations to carry out calculations (BIDMAS) [6C9]
- Add and subtract fractions and mixed numbers [6F4]
- Multiply proper fractions and mixed numbers by whole numbers [5F5]
- Multiply simple pairs of proper fractions [6F5a]
- Divide proper fractions by whole numbers [6F5b]
- Multiply and divide numbers by 10, 100 and 1000 [6F9a]
- Multiply a single-digit number up to 2 decimal places by a whole number [6F9b]
- Divide using decimals [6F9c]
- Calculate percentages of amounts [6R2]


## Focus activity: Multiply or divide by 10,100 or 1000

## 6C6, 6F9a

You will need: place-value grids, digit cards.
Place three digit cards in a place-value grid, e.g. 4, 1 and 2 to make 412.

Remind children of the different aspects of place value: the position of a digit determines its value. We work out the value by multiplying the digit by its position. In the hundreds place is 4 , so its value is 400 . We find the value of the whole number by adding together the values from each position, so $400+10+2=412$.

Explore dividing 412 by 1000, modelling the shift of place value to the right on a place value grid. Discuss that each digit becomes 1000 times smaller:

2 becomes $\frac{2}{1000}=0.002 ; 10$ becomes $\frac{2}{10001000}=\frac{1}{100}=$ 0.01 and so on. Highlight that the zero is needed for each part of the number as a placeholder, to ensure that the digits are in the correct position for their value.
${ }^{\text {step }} 4$
Ask children to choose some different 3-digit numbers and to use a place value grid to explore what happens when multiplying or dividing by 10,100 and 1000 .

Step 5
As a class, write some general statements to summarise what happened, e.g. when you multiply by 100 , you make each digit 100 times bigger; when you divide by 1000 , you make each digit 1000 times smaller.

| Qu. No. | Question | Answer | Mark | Domain ref. | Focus activity |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $1 \times 1=\square$ | 1 | 1 | 4C6b | Y4 Autumn Test 2 |
| 2 | $392+419=\square$ | 811 | 1 | 3C2 | Y3 Autumn Test 4 |
| 3 | $\square=4 \times 7$ | 28 | 1 | 3C6 | Y3 Spring Test 5 |
| 4 | $28 \times 4=\square$ | 112 | 1 | 3C7 | Y3 Spring Test 6 , Y3 Summer Test 5 |
| 5 | $12 \times 8=\square$ | 96 | 1 | 4C6a | Y4 Spring Test 6 |
| 6 | $6734-3874=\square$ | 2860 | 1 | 4C2 | Y4 Autumn Test 4 |
| 7 | $\square=300 \times 9$ | 2700 | 1 | 4C6b | Y4 Summer Test 2 |
| 8 | $\frac{5}{12}+\frac{11}{12}=\square$ | $\frac{16}{12} \text { or } 1 \frac{4}{12} \text { or } 1 \frac{1}{3}$ | 1 | 4 F 4 | Y4 Spring Test 1 |
| 9 | $\frac{3}{4} \times 8480=\square$ | 6360 | 1 | 4F10a | Y3 Autumn Test 6 |
| 10 | $300 \times 400=\square$ | 120,000 | 1 | 5C6a | Y5 Spring Test 6 |
| 11 | $647,374-85,636=$ | 561,738 | 1 | 5C2 | Y5 Autumn Test 5 |
| 12 | $\square=4 \times 33 \times 5$ | 660 | 1 | 4C6b | Y4 Summer Test 4, Y4 Summer Test 5 |
| 13 | $8438 \times 5=\square$ | 42,190 | 1 | 5C7a | Y5 Summer Test 1 |
| 14 | $8652 \div 3=\square$ | 2884 | 1 | 5C7b | Y5 Autumn Test 2, <br> Y5 Summer Test 2 |
| 15 | $64.3+7.83=\square$ | 72.13 | 1 | 5 F8 | Y4 Spring Test 5 |
| 16 | $\square=\frac{3}{25} \times 400$ | 48 | 1 | $5 F 12$ | Y4 Summer Test 1, Y5 Summer Test 3 |


| 17 | $14-10 \div 2=$ | 9 | 1 | 6C9 | Y6 Autumn Test 4, <br> Y6 Autumn Test 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18 | $0.002 \times 100=\square$ | 0.2 | 1 | 6F9a | Y6 Spring Test 1 |
| 19 | $\frac{3}{9} \times 4=\square$ | $\frac{4}{3}$ or $1 \frac{1}{3}$ | 1 | 5 F5 | Y5 Summer Test 6 |
| 20 | $30 \%$ of $40=\square$ | 12 | 1 | 6R2 | Y6 Summer Test 6 |
| 21 | $38 \times 76=\square$ | 2888 | 2 | 5C7a | Y5 Autumn Test 2, Y5 Summer Test 1 |
| 22 | $902 \div 41=\square$ | 22 | 2 | $\begin{gathered} \text { 6C7b or } \\ 6 C 7 c \end{gathered}$ | Y6 Spring Test 6 |
| 23 | $\square \times 20=4000$ | 200 | 1 | 6C8 | Y6 Autumn Test 1 |
| 24 | $\frac{1}{5} \times \frac{1}{7}=\square$ | $\frac{1}{35}$ | 1 | 6F5a | Y6 Summer Test 3 |
| 25 | $\square=-2+4$ | 2 | 1 | 6N5 | Y6 Autumn Test 6 |
| 26 | $0.7 \div 1000=\square$ | 0.0007 | 1 | 6F9a | Y6 Spring Test 1, Y6 Summer Test 2 |
| 27 | $53.13 \div 7=\square$ | 7.59 | 1 | 6F9c | Y6 Spring Test 6 |
| 28 | $70 \% \times 400=\square$ | 280 | 1 | 6R2 | Y6 Summer Test 6 |
| 29 | $\frac{1}{2}-\frac{1}{7}=\square$ | $\frac{5}{14}$ | 1 | 6F4 | Y5 Summer Test 5, Y6 Spring Test 2, Y6 Spring Test 3 |
| 30 | $\frac{1}{3} \div 2=\square$ | $\frac{1}{6}$ | 1 | 6F5b | Y6 Summer Test 4 |
| 31 | $2052 \div 32=\square$ | $\begin{gathered} 64 \text { r4 or } 64 \frac{1}{8} \\ \text { or } 64.125 \end{gathered}$ | 2 | $\begin{gathered} \text { 6C7b or } \\ 6 C 7 c \end{gathered}$ | Y6 Spring Test 6, <br> Y6 Summer Test 5 |
| 32 | $9247 \times 94=\square$ | 869,218 | 2 | 6C7a | Y6 Spring Test 4 |
| Total marks |  |  | 36 |  |  |

