

# Spring Test 4

## 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: Long multiplication of up to four digits by a two-digit number

### A teaching suggestion

**Step 1** Display:

$$\begin{array}{r} 3683 \\ \times 34 \\ \hline \end{array}$$

**Step 2** Explain that the children are going to extend the formal method for long multiplication, and remind them that it is like doing three calculations but only having to write one!

**Step 3** Demonstrate that you start by multiplying by the ones for the first calculation, so  $4 \times 3683 = 14732$ .

$$\begin{array}{r} 3683 \\ \times 34 \\ \hline 14732 \\ 231 \phantom{0} \\ \hline \end{array}$$

**Step 4** Explain that the second calculation is multiplying by the tens. Emphasise that you are multiplying by 30 (not 3), so  $3683 \times 30 = 110490$ .

$$\begin{array}{r} 3683 \\ \times 34 \\ \hline 14732 \\ 110490 \\ \hline 110490 \\ 14732 \\ \hline 125222 \\ 22 \phantom{0} \\ \hline \end{array}$$

**Step 5** Next, demonstrate the third calculation, where the answers to the other two parts are added together, so  $14732 + 110490 = 125222$ .

$$\begin{array}{r} 3683 \\ \times 34 \\ \hline 14732 \\ 110490 \\ \hline 110490 \\ 14732 \\ \hline 125222 \\ 11 \phantom{0} \\ \hline \end{array}$$

**Step 6** Work through lots of examples with the children, and then let them work with a partner before trying the calculations independently.

Question number	Question	Answer	Marks	Related test
1	$0.3 + \square = 1$	0.7	1	Y5 Summer Test 4
2	$\square = 70 \times 100$	7000	1	Y5 Autumn Test 5
3	$4^2 = \square$	16	1	Y5 Autumn Test 4
4	$11 = \square \div 12$	132	1	Y4 Autumn Test 3, Y4 Summer Test 2
5	$8418 \div 5 = \square$	1683 r3	1	Y5 Autumn Test 6
6	$49 = \square^2$	7	1	Y5 Autumn Test 4
7	$19 - \square = 30 \div 2$	4	1	Y6 Autumn Test 4
8	$5455 \times 7 = \square$	38 185	1	Y5 Spring Test 3
9	$\frac{3}{14} - \frac{1}{7} = \square$	$\frac{1}{14}$ (or equiv)	1	Y5 Spring Test 6
10	$4.8652 \times 100 = \square$	486.52	1	Y6 Spring Test 3
11	$\square = 10^3$	1000	1	Y5 Spring Test 1
12	$\frac{1}{3} \times \frac{1}{10} = \square$	$\frac{1}{30}$ (or equiv)	1	Y6 Spring Test 2
13	$(7 + 3) \times 5 = \square$	50	1	Y6 Spring Test 1
14	$\frac{2}{3}$ of 24 = $\square$	16	1	Y6 Autumn Test 3
15	$\frac{11}{4} - \frac{1}{12} = \square$	$2\frac{8}{12}$ (or equiv)	1	Y6 Autumn Test 2
16	$\frac{2}{5} \times \frac{1}{5} = \square$	$\frac{2}{25}$ (or equiv)	1	Y6 Spring Test 2
17	$\square = 8000 - 4219$	3781	1	Y5 Autumn Test 3
18	$645283 - 4395 = \square$	640 888	1	Y5 Spring Test 4
19	$9165 \div 5 = \square$	1833	1	Y5 Spring Test 5
20	$373 \times 94 = \square$	35 062	2*	Y6 Autumn Test 1
21	$6 \times \square = 4656$	776	1	Y5 Spring Test 5, Y4 Autumn Test 3
22	$438.7 + 3.86 + 5.9 = \square$	448.46	1	Y6 Autumn Test 5
23	$7003 - \square = 2885$	4118	1	Y5 Autumn Test 3, Y3 Autumn Test 1
24	$7 = 1904 \div \square$	272	1	Y5 Spring Test 5, Y4 Autumn Test 3
25	$\square + 936 = 14825$	13 889	1	Y6 Autumn Test 5, Y3 Autumn Test 1
26	$6732 \div 17 = \square$	396	2*	Y6 Autumn Test 6
27	$2794 \times 75 = \square$	209 550	2*	Y6 Spring Test 4
<b>Total marks</b>			<b>30</b>	

\* award 1 mark if there is one error in the working