

Autumn 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 fractions with multiples of the same denominator
- Complements of 1
- Multiplication and division of whole numbers and decimals by 10, 100 and 1000
- Square and cube numbers
- Formal written method for short multiplication and short division with remainders
- Formal written method for long multiplication of up to three digits by a two-digit number
- Finding fractions of amounts
- Missing number calculations with all four operations

Review: Balanced calculations

A teaching suggestion

- Step 1** Discuss the meaning of the = sign. Establish that whatever is on one side of the sign needs to be equal to whatever is on the other side. Show the children a pair of balance scales and demonstrate by getting five identical objects and putting three on one side and two on the other. The scales are not balanced; they are not equal.
- Step 2** Display $7 \times 6 = 11 + \square$. Clearly 7×6 does not equal 11, so this calculation does not yet balance. Something needs to be done to the 11. Ask the children to solve the problem, and then display the completed sum $7 \times 6 = 11 + 31$.
- Step 3** Complete several examples together and then start to move the position of the missing number. The position that causes most errors is $32 \div 8 = \square \times 2$. Explain that people who do not understand these calculations put $32 \div 8 = 4 \times 2$. Ask the children to spot the error and to explain why it has happened.
- Step 4** Solve together $32 \div 8 = \square \times 2$. Since $32 \div 8 = 4$, then $\square \times 2$ must also equal 4, so the missing number is 2.
- Step 5** 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	$3 + \square = 6 \times 2$	9	1	Y6 Autumn Test 4
2	$\square = 39 \times 100$	3900	1	Y5 Autumn Test 5
3	$1 - 0.5 = \square$	0.5	1	Y5 Summer Test 4
4	$12^2 = \square$	144	1	Y5 Autumn Test 4
5	$\frac{8}{5} + \frac{4}{5} = \square$	$2\frac{2}{5}$ (or equiv)	1	Y6 Autumn Test 2
6	$5000 \div 10 = \square$	500	1	Y5 Autumn Test 5
7	$8 = 72 \div \square$	9	1	Y4 Autumn Test 3, Y3 Summer Test 3
8	$\frac{3}{4} - \frac{3}{8} = \square$	$\frac{3}{8}$ (or equiv)	1	Y5 Spring Test 6
9	$6.2 \times 100 = \square$	620	1	Y5 Spring Test 2
10	$16 + 2 = 3 \times \square$	6	1	Y6 Autumn Test 4
11	$10^3 = \square$	1000	1	Y5 Spring Test 1
12	$\square = \frac{4}{9}$ of 18	8	1	Y6 Autumn Test 3
13	$6423.6 \div 1000 = \square$	6.4236	1	Y5 Spring Test 2
14	$\frac{7}{3} - \frac{1}{6} = \square$	$2\frac{1}{6}$ (or equiv)	1	Y6 Autumn Test 2
15	$3 \times 5 = \square - 5$	20	1	Y6 Autumn Test 4
16	$\frac{3}{7}$ of 21 = \square	9	1	Y6 Autumn Test 3
17	$5022 - 3045 = \square$	1977	1	Y5 Autumn Test 3
18	$150 = \square \times 25$	6	1	Y4 Autumn Test 3
19	$12 + \square = 19 - 2$	5	1	Y6 Autumn Test 4
20	$4787 \div 3 = \square$	1595 r2	1	Y5 Autumn Test 6
21	$657 \times 93 = \square$	61 101	2*	Y6 Autumn Test 1
22	$400 - \square = 288$	112	1	Y5 Autumn Test 3, Y3 Autumn Test 1
23	$9232 \div 8 = \square$	1154	1	Y5 Spring Test 5
24	$3816 \times 8 = \square$	30 528	1	Y5 Spring Test 3
25	$5676 = 2 \times \square$	2838	1	Y5 Spring Test 5, Y4 Autumn Test 3
26	$\square \div 147 = 9$	1323	1	Y5 Spring Test 3, Y4 Autumn Test 5
27	$613 + 28 + 78 316 = \square$	78 957	1	Y5 Spring Test 4
28	$762 \times 48 = \square$	36 576	2*	Y6 Autumn Test 1
Total marks			30	

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