YEAR 6 ARITHMETIC PRACTICE TESTS SET B

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:

Qu. No.	Question	Answer	Mark	Domain ref.	Focus activity
1	1 × 1 =	1	1	4C6b	Y4 Autumn Test 2
2	392 + 419 =	811	1	3C2	Y3 Autumn Test 4
3	$= 4 \times 7$	28	1	3C6	Y3 Spring Test 5
4	28 × 4 =	112	1	3C7	Y3 Spring Test 6, Y3 Summer Test 5
5	12 × 8 =	96	1	4C6a	Y4 Spring Test 6
6	6734 - 3874 =	2860	1	4C2	Y4 Autumn Test 4
7	= 300 × 9	2700	1	4C6b	Y4 Summer Test 2
8	$\frac{5}{12} + \frac{11}{12} =$	$\frac{16}{12}$ or $1\frac{4}{12}$ or $1\frac{1}{3}$	1	4F4	Y4 Spring Test 1
9	$\frac{3}{4}$ × 8480 =	6360	1	4F10a	Y3 Autumn Test 6
10	300 × 400 =	120,000	1	5C6a	Y5 Spring Test 6
11	647,374 - 85,636 =	561,738	1	5C2	Y5 Autumn Test 5
12	$\boxed{}=4\times 33\times 5$	660	1	4C6b	Y4 Summer Test 4, Y4 Summer Test 5
13	8438 × 5 =	42,190	1	5C7a	Y5 Summer Test 1
14	8652 ÷ 3 =	2884	1	5C7b	Y5 Autumn Test 2, Y5 Summer Test 2
15	64.3 + 7.83 =	72.13	1	5F8	Y4 Spring Test 5
16	$= \frac{3}{25} \times 400$	48	1	5F12	Y4 Summer Test 1, Y5 Summer Test 3

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.



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.

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.

17	14 - 10 ÷ 2 =	9	1	6C9	Y6 Autumn Test 4, Y6 Autumn Test 5
18	0.002 × 100 =	0.2	1	6F9a	Y6 Spring Test 1
19	$\frac{3}{9} \times 4 =$	$\frac{4}{3}$ or $1\frac{1}{3}$	1	5F5	Y5 Summer Test 6
20	30% of 40 =	12	1	6R2	Y6 Summer Test 6
21	38 × 76 =	2888	2	5C7a	Y5 Autumn Test 2, Y5 Summer Test 1
22	902 ÷ 41 =	22	2	6C7b or 6C7c	Y6 Spring Test 6
23	20 = 4000	200	1	6C8	Y6 Autumn Test 1
24	$\frac{1}{5} \times \frac{1}{7} = $	<u>1</u> 35	1	6F5a	Y6 Summer Test 3
25	= -2 + 4	2	1	6N5	Y6 Autumn Test 6
26	0.7 ÷ 1000 =	0.0007	1	6F9a	Y6 Spring Test 1, Y6 Summer Test 2
27	53.13 ÷ 7 =	7.59	1	6F9c	Y6 Spring Test 6
28	70% × 400 =	280	1	6R2	Y6 Summer Test 6
29	$\frac{1}{2} - \frac{1}{7} = \boxed{}$	<u>5</u> 14	1	6F4	Y5 Summer Test 5, Y6 Spring Test 2, Y6 Spring Test 3
30	$\frac{1}{3} \div 2 =$	<u>1</u> 6	1	6F5b	Y6 Summer Test 4
31	2052 ÷ 32 =	64 r4 or 64 1/8 or 64.125	2	6C7b or 6C7c	Y6 Spring Test 6, Y6 Summer Test 5
32	9247 × 94 =	869,218	2	6C7a	Y6 Spring Test 4
Total marks					