

Pack B

Practice National Curriculum Test

Key stage 2

Mathematics

Paper 1: arithmetic

| | |
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| First name | |
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| Middle name | |
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|-----------|--|
| Last name | |
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|---------------|-----|--|-------|--|------|--|
| Date of birth | Day | | Month | | Year | |
|---------------|-----|--|-------|--|------|--|

| | |
|-------------|--|
| School name | |
|-------------|--|

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Please do not write on this page.

Instructions

You **must not use a calculator** to answer any questions in this test.

Questions and answers

You have **30 minutes** to complete this test.

Work as quickly and as carefully as you can.

Put your answer in the **box** for each question.

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All answers should be given as a **single value**.

For questions expressed as common fractions or mixed numbers, you should give your answers as common fractions or mixed numbers.

If you cannot do a question, **go on to the next one**.

You can come back to it later, if you have time.

If you finish before the end, go back and check your work

Marks

The number under each box at the side of the page tells you the number of marks available for each question.

In this test, long division and long multiplication questions are worth

2 marks each. You will be awarded **2 marks** for a correct answer.

You may get **1 mark** for showing a formal method.

All other questions are worth **1 mark each**.

1

4 x 5 x 20 =

4 x 5 = 20

20 x 20 = 400

400

1 mark

2

7 x 48 =

Method 1:

48

x

7

336

Method 2:

40 x 7 = 280

8 x 7 = 56

280 + 56 = 336

336

1 mark

3

540 ÷ 6 =

Method 1:

540

6

90

Method 2:

54 ÷ 6 = 9

540 ÷ 6 = 90

90

1 mark

4

$6 \times 304 =$

Method 1:

$$\begin{array}{r} 304 \\ \times 6 \\ \hline 1824 \end{array}$$

Method 2:

$300 \times 6 = 1800$

$4 \times 6 = 24$

$1800 + 24 = 1824$

1,824

1 mark

5

$\underline{7,610} = 7,003 + 607$

Check using the inverse:

$$\begin{array}{r} 7003 \\ + 607 \\ \hline 7610 \end{array}$$

1

$$\begin{array}{r} 7610 \\ - 607 \\ \hline 7003 \end{array}$$

1 mark

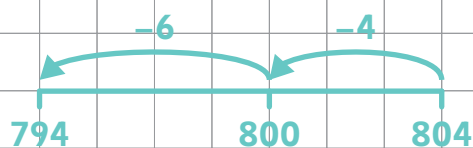
6

$804 - 10 =$

Method 1:

$$\begin{array}{r} 78104 \\ - 10 \\ \hline 794 \end{array}$$

Method 2:



794

1 mark



7

$$6.5 + 4.814 =$$

Check using the inverse:

$$\begin{array}{r} 6.500 \\ + 4.814 \\ \hline 11.314 \\ 1 \end{array}$$

$$\begin{array}{r} 11.314 \\ - 4.814 \\ \hline 6.500 \end{array}$$

11.314

1 mark

8

$$\underline{5,020} = 4,823 + 197$$

Check using the inverse:

$$\begin{array}{r} 4823 \\ + 197 \\ \hline 5020 \\ 111 \end{array}$$

$$\begin{array}{r} 5020 \\ - 197 \\ \hline 4823 \end{array}$$

1 mark

9

$$\frac{3}{4} \times \frac{4}{7} =$$

Multiply numerators

Multiply denominators

$$3 \times 4 = 12$$

$$4 \times 7 = 28$$

$$\frac{12}{28} \text{ or } \frac{6}{14} \text{ or } \frac{3}{7}$$

1 mark



10

$$\underline{1,400} = 100 \times 14$$

Multiplying means the number will be greater.

100 means my digits will move two places to the left

14. → 1400.



1 mark

11

$$3,200 \div 4 =$$

Method 1:

$$\begin{array}{r} 800 \\ 4 \overline{) 3200} \\ \underline{4} \\ 32 \\ \underline{32} \\ 00 \\ \underline{00} \\ 0 \end{array}$$

Method 2:

$$\begin{aligned} 32 \div 4 &= 8 \\ 3,200 \div 4 &= 800 \end{aligned}$$

800



1 mark

12

$$\underline{1,793} + 4,582 = 6,375$$

Use the inverse

$$\begin{array}{r} 5 \times 123175 \\ - 4582 \\ \hline 1793 \end{array}$$

Check by completing

$$\begin{array}{r} 1793 \\ + 4582 \\ \hline 6375 \\ 11 \end{array}$$



1 mark



13

$$613 - \underline{45} = 568$$

Subtract:

$$\begin{array}{r} \overset{5}{\cancel{6}} \overset{10}{\cancel{1}} \overset{1}{\cancel{3}} \\ - \quad 5 \quad 6 \quad 8 \\ \hline \quad \quad 4 \quad 5 \end{array}$$

Check by completing the calculation:

$$\begin{array}{r} \overset{5}{\cancel{6}} \overset{10}{\cancel{1}} \overset{1}{\cancel{3}} \\ - \quad \quad 4 \quad 5 \\ \hline \quad 5 \quad 6 \quad 8 \end{array}$$

1 mark

14

$$2,100 \div 7 =$$

Method 1:

$$\begin{array}{r} \quad \quad 3 \quad 0 \quad 0 \\ 7 \overline{) 2 \quad 1 \quad 0 \quad 0} \end{array}$$

Method 2:

$$\begin{array}{l} 21 \div 7 = 3 \\ 2100 \div 7 = 300 \end{array}$$

300

1 mark

15

$$\frac{5}{12} + \frac{1}{4} =$$

Find the lowest common denominator

$$4 \times 3 = 12$$

$$\begin{array}{r} \frac{5}{12} + \frac{1}{4} \\ \frac{5}{12} + \frac{3}{12} \xrightarrow{\times 3} = \frac{8}{12} = \frac{4}{6} = \frac{2}{3} \end{array}$$

$$\frac{8}{12} \text{ or } \frac{4}{6} \text{ or } \frac{2}{3}$$

1 mark



16

$$0.2 \div 100 =$$

Dividing means the number will be smaller.

100 means my digits will move two places to the right

0.2
0.002

0.002

1 mark

17

$$376 \div 8 =$$

Check using the inverse:

8 | 3756
47

x 47
3576

47

1 mark

18

$$\frac{1}{4} \div 5 =$$

$$4 \times 5 = 20$$

Numerator stays the same

$$\frac{1}{20}$$

1 mark



19

$$56.4 - 22.453 =$$

Check using the inverse:

$$\begin{array}{r} 56.400 \\ - 22.453 \\ \hline 33.947 \end{array}$$

$$\begin{array}{r} 33.947 \\ + 22.453 \\ \hline 56.400 \\ \hline 1 \quad 1 \quad 1 \end{array}$$

33.947

1 mark

20

$$\frac{1}{2} + \frac{1}{4} + \frac{1}{12} =$$

Find the lowest common denominator

$$2 \times 6 = 12$$

$$4 \times 3 = 12$$

$$\begin{array}{r} \frac{1}{2} + \frac{1}{4} + \frac{1}{12} \\ \times 6 \quad \times 3 \\ \hline \frac{6}{12} + \frac{3}{12} + \frac{1}{12} = \frac{10}{12} \end{array}$$

$$\frac{10}{12} = \frac{5}{6}$$

 $\frac{10}{12}$ or $\frac{5}{6}$

1 mark

21

$$60 + 35 \div 7 =$$

Method 1:~~Brackets~~~~Indices~~Division ✓ $35 \div 7 = 5$ ~~Multiplication~~Addition ✓ $60 + 5 = 65$ ~~Subtraction~~Method 2:

$$\begin{array}{r} + \quad 5 \\ 60 + 35 \div 7 = 65 \end{array}$$

65

1 mark



22

703

x

28

5624

14060

19684

19,684

2 marks

23

$1 + \frac{4}{5} + \frac{3}{5} =$

Add the fractions.

$\frac{4}{5} + \frac{3}{5} = \frac{7}{5}$

Convert to a mixed number

$\frac{7}{5} = 1\frac{2}{5}$

Add the wholes and fraction

$1 + 1 = 2$

$2 + \frac{2}{5} = 2\frac{2}{5}$

Convert whole number to fraction

$1 = \frac{5}{5}$

Add the fractions.

$\frac{5}{5} + \frac{4}{5} + \frac{3}{5} = \frac{12}{5}$

Convert to mixed number

$\frac{12}{5} = 2\frac{2}{5}$

1 mark

24

74% of 800 =

Method 1:

10% of 800 = 80

1% of 800 = 8

80 x 7 = 560

70% of 800 = 560

8 x 4 = 32

4% of 800 = 32

560 + 32 = 592

Method 2:

800 ÷ 100 = 8

74

x

8

592

592

1 mark

25

$$5,490 \div 6 =$$

$$\begin{array}{r} 915 \\ 6 \overline{) 5490} \\ \underline{6} \\ 54 \\ \underline{48} \\ 60 \\ \underline{60} \\ 0 \end{array}$$

915

1 mark

26

$$\begin{array}{r} 4528 \\ \times 26 \\ \hline 27168 \\ 90560 \\ \hline 117728 \\ 1 \end{array}$$

117,728

2 marks

27

$$\frac{5}{6} + \frac{2}{3} =$$

Find the lowest common denominator

$$3 \times 2 = 6$$

$$\begin{array}{r} \frac{5}{6} + \frac{2}{3} \\ \frac{5}{6} + \frac{4}{6} \end{array} \xrightarrow{\times 2} \frac{9}{6} = \frac{3}{2} = 1\frac{1}{2}$$

 $\frac{9}{6}$ or $\frac{3}{2}$ or $1\frac{1}{2}$

1 mark



31

84% of 350 =

| | | | | | | | | | | | | | | | | | | | |
|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Method 1: | | | | | | | | | | Method 2: | | | | | | | | | |
| 10% of 350 = 35 | | | | | | | | | | <div> <div>3</div> <div>5</div> <div>0</div> </div> | | | | | | | | | |
| 1% of 350 = 3.5 | | | | | | | | | | <div> <div>x</div> <div>8</div> <div>4</div> </div> | | | | | | | | | |
| | | | | | | | | | | <div> <div>1</div> <div>2</div> <div>4</div> <div>0</div> <div>0</div> </div> | | | | | | | | | |
| 35 x 8 = 280 | | | | | | | | | | <div> <div>2</div> <div>4</div> <div>8</div> <div>0</div> <div>0</div> <div>0</div> </div> | | | | | | | | | |
| 3.5 x 4 = 14 | | | | | | | | | | <div> <div>2</div> <div>9</div> <div>4</div> <div>0</div> <div>0</div> </div> | | | | | | | | | |
| 280 + 14 = 294 | | | | | | | | | | <div>294</div> | | | | | | | | | |
| | | | | | | | | | | 29,400 ÷ 100 = 294 | | | | | | | | | |

1 mark

32

$\frac{3}{8} \div 6 =$

| | | | | | | | | | | | | | | | | | | | |
|--------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|
| 8 x 6 = 48 | | | | | | | | | | | | | | | | | | | |
| Numerator stays the same | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | <div> $\frac{3}{48} = \frac{1}{16}$ </div> | | | | |

1 mark

33

0.8 x 42 =

| | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|
| Method 1: | | | | | | | | | | Method 2: | | | | | | | | | |
| | | | | | | | | | | 0.8 x 42 = | | | | | | | | | |
| <div> <div>4</div> <div>2</div> </div> | | | | | | | | | | <div> <div>4</div> <div>2</div> </div> | | | | | | | | | |
| <div> <div>x</div> <div>0</div> <div>.</div> <div>8</div> </div> | | | | | | | | | | <div> <div>x</div> <div>8</div> </div> | | | | | | | | | |
| <div> <div>3</div> <div>1</div> <div>3</div> <div>.</div> <div>6</div> </div> | | | | | | | | | | <div> <div>3</div> <div>1</div> <div>3</div> <div>.</div> <div>6</div> </div> | | | | | | | | | |
| <div> <div>0</div> <div>0</div> <div>.</div> <div>0</div> </div> | | | | | | | | | | | | | | | | | | | |
| <div> <div>3</div> <div>3</div> <div>.</div> <div>6</div> </div> | | | | | | | | | | <div>33.6</div> | | | | | | | | | |

1 mark

34

45% of 580 =

| | | |
|------------------|--------------------|------------------|
| Method 1: | Method 2: | Method 3: |
| 10% of 580 = 58 | 580 | 50% of 580 = 290 |
| 5% of 580 = 29 | x 45 | 5% of 580 = 29 |
| | 2900 | |
| 40% of 580 = 232 | 23200 | 290 - 29 = 261 |
| 58 x 4 = 232 | 26100 | 261 |
| | 1 | |
| 232 + 29 = 261 | 26,100 ÷ 100 = 261 | |

☐
1 mark

35

$\frac{5}{9} \times 540 =$

| | |
|-----------------|--------------|
| Method 1: | Method 2: |
| 540 x 5 = 2,700 | 540 ÷ 9 = 60 |
| 2,700 ÷ 9 = 300 | 60 x 5 = 300 |
| | 300 |

☐
1 mark

36

315704

184

31

260

248

124

124

0

184

☐
2 marks