2019 national curriculum tests

Key stage 2

Mathematics

Paper 1: arithmetic

First name	
Middle name	
Last name	
Date of birth	Day Month Year
School name	
DfE number	

H O 0 0 6 0 A 0 1 2 0

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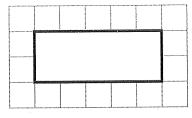
Please do not write on this page.

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.

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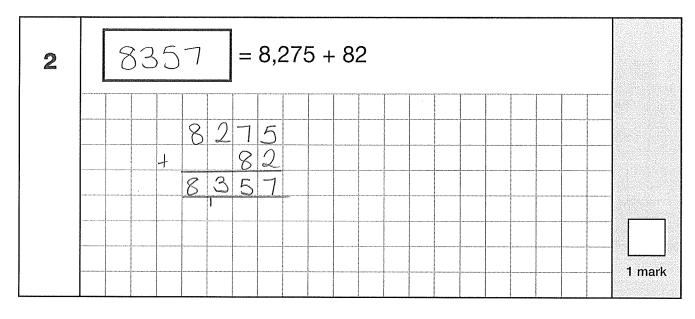You may get **1** mark for showing a formal method.

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

1 $\boxed{6090}$ = 6,000 + 90

```
    6 0 0 0
  +     9 0
    6 0 9 0
```

1 mark

2 $\boxed{8357}$ = 8,275 + 82

```
    8 2 7 5
  +     8 2
    8 3 5 7
```

1 mark

3   826 = 800 + $\boxed{20}$ + 6

```
      8 2 6

  8 0 0  2 0   6
```

1 mark

HOOO60AO420

4 [336] + 5 = 341

```
      3
    3 4̶ 1
  -     5
    3 3 6
```

1 mark

5 9 × 41 =

```
      4 1
  ×     9
    3 6 9
```

[369]

1 mark

6 5.87 + 3.123 =

```
    3 . 1 2 3
  + 5 . 8 7 0
    8 . 9 9 3
```

[8.993]

1 mark

7 $180 \div 3 =$

$$3 \overline{)180} = 60$$

60

1 mark

8 $120 \div 12 =$

$$12 \overline{)120} = 10$$

10

1 mark

9 $213 \times 0 =$

Any number multiplied by 0 is 0.

$$\begin{array}{r} 213 \\ \times \quad\ 0 \\ \hline 000 \end{array}$$

0

1 mark

10 $91 \div 7 =$

$$7\overline{\smash{\big)}9^21} \quad \begin{array}{c}1\ 3\end{array}$$

$$\boxed{13}$$

11 $\boxed{22} = 87 - 65$

$$\begin{array}{r} 8\ 7 \\ -\ 6\ 5 \\ \hline 2\ 2 \end{array}$$

12 $602 - \boxed{8} = 594$

$$\begin{array}{r} 5\ 9 \\ \cancel{6}\ \cancel{0}\ ^12 \\ -\ 5\ 9\ 4 \\ \hline 0\ 0\ 8 \end{array}$$

13 1,210 ÷ 11 =

$$\begin{array}{r} 1\ 1\ 0 \\ 11\ \overline{)1\ 2\ ^1 1\ 0} \end{array}$$

110

1 mark

14 25.34 × 10 =

25.34

253.4

263.4

1 mark

15 60 ÷ (30 − 24) =

30 − 24 = 6

60 ÷ 6 = 10

Remember the correct order of operations eg. BODMAS

10

1 mark

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16 $3^3 =$

$3^3 = 3 \times 3 \times 3$

$3^3 = 9 \times 3$

$3^3 = 27$

27

1 mark

17 $101 \times 1,000 =$

$101 \times 1000 = 101\,000$

101000

1 mark

18 20% of 3,000 =

$3000 \div 10 = 300$

$10\% = 300$

$2 \times 300 = 600$

$20\% = 600$

600

1 mark

19   7 – 2.25 =

```
  6   9
  7 . ⁹0 ¹0
-  2 . 2 5
  4 . 7 5
```

4.75

1 mark

---

20   0.9 ÷ 100 =

```
0 . 9 ⤳
0 . 0 0 9
```

0.009

1 mark

---

21   9 – 1.9 =

```
  ⁸9 . ¹0
-  1 . 9
  7 . 1
```

7.1

1 mark

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22

$$1\frac{3}{7} - \frac{4}{7} =$$

$$1\frac{3}{7} - \frac{4}{7}$$

$$\frac{10}{7} - \frac{4}{7} = \frac{6}{7}$$

$$\boxed{\frac{6}{7}}$$

1 mark

23

Show your method

```
      8 3 6
  ×     2 7
  _____
    5,8 5 2
+ 1 6 7 2 0
  _____
  2 2 5 7 2
```

$$\boxed{22572}$$

2 marks

24

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

Find a common denominator e.g. 20.

$$\left(\frac{1^{\times 4}}{5^{\times 4}} + \frac{3^{\times 5}}{4^{\times 5}}\right.$$

$$\frac{4}{20} + \frac{15}{20} = \frac{19}{20}$$

$$\boxed{\frac{19}{20}}$$

25

Show your method

```
        2 4
3 7 | 8 8 8
    -  7 4
      1 4 8
    - 1 4 8
```

```
    3 7  ₁
    7 4  ₂
  1 1 1  ₃
  1 4 8  ₄
```

$$\boxed{24}$$

26 $1\frac{1}{5} + 2\frac{1}{10} =$

$1\frac{1^{\times 2}}{5^{\times 2}} + 2\frac{1}{10}$

Find a common denominator e.g. 10

$1\frac{2}{10} + 2\frac{1}{10} = 3\frac{3}{10}$

$3\frac{3}{10}$

1 mark

27 35% of 320 =

10% of 320 = 320 ÷ 10 = 32
5% of 320 = 32 ÷ 2 = 16

$\begin{array}{r} 32 \\ \times\ 3 \\ \hline 96 \end{array}$

$\begin{array}{r} 96 \\ +\ 16 \\ \hline 112 \end{array}$

112

1 mark

28 $\frac{8}{9} - \frac{1}{4} =$

$\frac{8^{\times 4}}{9^{\times 4}} - \frac{1^{\times 9}}{4^{\times 9}}$

$\frac{32}{36} - \frac{9}{36} = \frac{23}{36}$

$\frac{23}{36}$

1 mark

29 51% of 900 =

50 % of 900 = 900 ÷ 2 = 450
1 % of 900 = 900 ÷ 100 = 9

51 % of 900 = 450 + 9

51% of 900 = 459

459

1 mark

30

```
      3 4 6 8
  ×       6 2
```
```
        6 9 3 6
      2 0 8 0 8 0   ← Remember to use a place
      2 1 5 0 1 6       holder.
```

Show your method

215016

2 marks

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31 $\frac{2}{3} \div 3 =$

$\frac{2}{3} \div 3 \quad = \quad \frac{2}{3} \times \frac{1}{3} \quad = \quad \frac{2}{9}$

$\boxed{\frac{2}{9}}$

1 mark

32 $2\frac{1}{2} - \frac{3}{4} =$

$2\frac{1}{2} \quad \frac{3}{4}$

$2\frac{2}{4} - \frac{3}{4}$

$\frac{10}{4} - \frac{3}{4} = \frac{7}{4}$ or $1\frac{3}{4}$

$\boxed{1\frac{3}{4}}$

1 mark

33 36% of 450 =

$$450 \div 100 = 4 \cdot 5$$

10% = 45   1% = 4·5

$$\frac{45}{\times 3} \quad \frac{4 \cdot 5}{\times 6} \quad \frac{135}{+ 27}$$
$$135 \quad 27 \cdot 0 \quad 162$$

162

1 mark

34 $1\frac{3}{4} \times 10 =$

$$1\frac{3}{4} \times \frac{10}{1} = 10\frac{30}{4} \quad or \quad \frac{70}{4} \quad or \quad 17\frac{2}{4}$$

$$4\overline{\smash{)}7\,^30} \quad 17\ r\ 2$$

$$\frac{70}{4}$$

1 mark

35 $\frac{5}{6} \times 540 =$

```
            9 0
    6 ) 5 ⁴4 0

        9 0
      ×   5
      4 5 0
```

450

36

Show your method

```
            9 7
  8 3 ) 8 ⁰0⁵5 1
      -  7 4 7 0
         5 8 1
      -  5 8 1
             0
```

```
    8 3 ₁
  1 6 6 ₂
  2 4 9 ₃
  3 3 2 ₄
  4 1 5 ₅
  4 9 8 ₆
  5 8 1 ₇
```

```
      7 ¹2
  8   ³3   0
  -     8   3
  7   4   7
```

97

[END OF TEST]

Please do not write on this page.

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