

2017 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						



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1

$40 + 1,000 =$

$$\begin{array}{r} 1000 \\ + 40 \\ \hline 1040 \end{array}$$

1040

1 mark

2

$707 + 1,818 =$

$$\begin{array}{r} 1818 \\ + 707 \\ \hline 2525 \end{array}$$

2525

1 mark

3

$\frac{4}{6} + \frac{3}{6} =$

$$\frac{4}{6} + \frac{3}{6} = \frac{7}{6} = 1\frac{1}{6}$$

$1\frac{1}{6}$

1 mark



4

$$505 \div 1 =$$

$$\begin{array}{r} 505 \\ 1 \overline{) 505} \end{array}$$

Any number divided by 1  
remains the same

505

1 mark

5

$$345 - 60 =$$

$$\begin{array}{r} 2 \\ 345 \\ - 60 \\ \hline 285 \end{array}$$

285

1 mark

6

$$2.7 + 3.014 =$$

$$\begin{array}{r} 3.014 \\ + 2.700 \\ \hline 5.714 \end{array}$$

5.714

1 mark



F00060A0520

7

$$\boxed{5100} = 4,500 + 600$$

$$\begin{array}{r} 4500 \\ + 600 \\ \hline 5100 \\ \hline \end{array}$$



1 mark

8

$$8 \times 33 =$$

$$\begin{array}{r} 33 \\ \times 8 \\ \hline 264 \\ \hline \end{array}$$

$$\boxed{264}$$


1 mark

9

$$72 \div 9 =$$

$$9 \overline{)72}$$

$$\begin{array}{l} 9 \quad 1 \\ 18 \quad 2 \\ 27 \quad 3 \\ 36 \quad 4 \\ 45 \quad 5 \\ 54 \quad 6 \\ 63 \quad 7 \\ 72 \quad 8 \end{array}$$

$$\boxed{8}$$


1 mark



10

$$167 \times 4 =$$

$$\begin{array}{r} 167 \\ \times 4 \\ \hline 668 \\ \hline \end{array}$$

668

1 mark

11

$$4,912 - 824 =$$

$$\begin{array}{r} 4912 \\ - 824 \\ \hline 4088 \end{array}$$

4088

1 mark

12

$$\frac{62}{100} - \frac{38}{100} =$$

$$\begin{array}{r} 5 \\ 62 \\ - 38 \\ \hline 24 \end{array} \quad \frac{24}{100} \rightarrow \frac{12}{50} \rightarrow \frac{6}{25}$$

$$\frac{6}{25}$$


1 mark



F 0 0 0 6 0 A 0 7 2 0

13

$$1159 - 100 = 1,059$$

$$\begin{array}{r} 1059 \\ + 100 \\ \hline 1159 \end{array}$$



1 mark

14

$$50 + (36 \div 6) =$$

$$50 + (36 \div 6) \quad \begin{array}{r} 6 \\ 6 \overline{) 36} \\ \underline{36} \\ 0 \end{array}$$

$$50 + 6 = 56$$

56



1 mark

15

$$\frac{4}{6} \times \frac{3}{5} =$$

$$\frac{4}{6} \times \frac{3}{5} = \frac{12}{30} \div 6 \rightarrow \frac{2}{5}$$

$$\frac{2}{5}$$


1 mark



16

$30 \times 40 =$

$$\begin{array}{r}
 40 \\
 \times 30 \\
 \hline
 00 \\
 + 1200 \\
 \hline
 1200
 \end{array}$$

1200

1 mark

17

$581 \div 7 =$

$$\begin{array}{r}
 083 \\
 7 \overline{)581} \\
 \underline{56} \phantom{0} \\
 21 \\
 \underline{21} \\
 0
 \end{array}$$

7  
14  
21  
28  
35  
42  
49  
56

83

1 mark

18

$0.04 \div 10 =$

$$\begin{array}{r}
 0.04 \\
 \hline
 0.004
 \end{array}$$

0.004

1 mark



F00060A0920

19

$$2,345 \times 1,000 =$$

$$2345 \times 1000$$

$$2345000$$

When multiplying whole numbers by 1000, add three zeros to the number

2345000

 1 mark

20

$$\begin{array}{r} 17 \overline{) 714} \\ \underline{68} \phantom{0} \\ 3 \phantom{0} \end{array}$$

$$\begin{array}{r} 17_1 \\ 34_2 \\ 51_3 \\ 68_4 \\ 85 \end{array}$$

Show your method

42

 2 marks




23

$$\frac{3}{4} - \frac{3}{8} =$$

$$\begin{array}{r} \frac{3^{\cancel{x}2}}{4^{\cancel{x}2}} - \frac{3}{8} \\ \hline \frac{6}{8} - \frac{3}{8} = \frac{3}{8} \end{array}$$

 1 mark

24

$$\begin{array}{r} \phantom{x} \phantom{+} \phantom{1} \phantom{9} \phantom{2} \phantom{2} \phantom{8} \\ \phantom{x} \phantom{+} \phantom{1} \phantom{9} \phantom{2} \phantom{2} \phantom{8} \\ \times \phantom{+} \phantom{1} \phantom{9} \phantom{2} \phantom{2} \phantom{8} \phantom{0} \\ \hline 418 \\ 46 \\ \hline 2508 \\ + 16720 \\ \hline 19228 \end{array}$$

Show  
your  
method
 2 marks


25

$$37.8 - 14.671 =$$

$$\begin{array}{r} 37.800 \\ - 14.671 \\ \hline 23.129 \end{array}$$

23.129

1 mark

26

$$\frac{1}{4} + \frac{1}{5} + \frac{1}{10} =$$

$$\frac{1 \times 5}{4 \times 5} + \frac{1 \times 4}{5 \times 4} + \frac{1 \times 2}{10 \times 2} \Rightarrow \frac{5}{20} + \frac{4}{20} + \frac{2}{20} = \frac{11}{20}$$

Find a common denominator  
eg. 20

 $\frac{11}{20}$ 

1 mark

27

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

$$\frac{4}{5} \div 4 = \frac{4}{5} \times \frac{1}{4} = \frac{4}{20} = \frac{1}{5}$$

 $\frac{1}{5}$ 

1 mark



F 0 0 0 6 0 A 0 1 3 2 0

28

$$\frac{5}{8} \div 2 =$$

$$\frac{5}{8} \div 2 = \frac{5}{8} \times \frac{1}{2} = \frac{5}{16}$$

$$\frac{5}{16}$$

1 mark

29

$$45\% \text{ of } 460 =$$

$$10\% \text{ of } 460 = 460 \div 10 = 46$$

$$5\% \text{ of } 460 = 23$$

$$\begin{array}{r} 46 \\ \times 4 \\ \hline 184 \\ \phantom{1}2 \end{array}$$

$$184 + 23 = 207$$

$$207$$

1 mark

30

$$2\frac{1}{3} + \frac{5}{6} =$$

$$2\frac{1^{\cancel{x2}}}{3^{\cancel{x2}}} + \frac{5}{6}$$

$$\rightarrow 2\frac{2}{6} + \frac{5}{6} = 2\frac{7}{6} = 3\frac{1}{6}$$

$$3\frac{1}{6}$$

1 mark



**31**

7% of 500 =

$$7 \times 5 = 35$$

**35**

1 mark

**32**

$$\frac{2}{6} - \frac{1}{8} =$$

$$\frac{2 \times 4}{6 \times 4} - \frac{1 \times 3}{8 \times 3} =$$

$$\frac{8}{24} - \frac{3}{24} = \frac{5}{24}$$

Find a common denominator e.g. 24

 **$\frac{5}{24}$** 

1 mark



**33**

$0.9 \times 200 =$

$0.9 \times 100 = 90$

$90 \times 2 = 180$

**180**

1 mark

**34**

$15\% \times 1,000 =$

$15 \times 10 = 150$

**150**

1 mark



35

$$1\frac{1}{2} \times 57 =$$

$$1 \times 57 = 57$$

$$\frac{1}{2} \times 57 = 28.5$$

$$\begin{array}{r} 57.0 \\ + 28.5 \\ \hline 85.5 \end{array}$$

$$85\frac{1}{2}$$


1 mark

36

$$\begin{array}{r} 59 \overline{) 2142} \\ - 177 \phantom{1} \\ \hline 472 \\ - 472 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 59 \phantom{1} \\ 118 \phantom{2} \\ 177 \phantom{3} \\ 236 \phantom{4} \\ 295 \phantom{5} \\ 354 \phantom{6} \\ 413 \phantom{7} \\ 472 \phantom{8} \end{array}$$

Show  
your  
method

38



2 marks



F 0 0 0 6 0 A 0 1 7 2 0

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Standards  
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2017 key stage 2 mathematics

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