

1

40 + 1,000 =

This is a place value question. The pupils should add 4 tens (40) to the tens column, mentally.

1,040

1 mark

2

707 + 1,818 =

1,818 + 707 = 2,525

can be reversed the question is ordered the other way to test placing the values in the column correctly

2,525

1 mark

3

4/6 + 3/6 =

4/6 + 3/6 = 7/6

both correct

7/6 or 1 1/6

1 mark

4

505 ÷ 1 =

This is testing the pupils understanding of dividing by 1. Any number divided by 1 equals itself.

505

1 mark

5

345 - 60 =

345 - 60 = 285

mentally:

345 - 45 = 300 300 - 15 = 285

285

1 mark

6

2.7 + 3.014 =

can be reversed. { 3.014 + 2.700 = 5.714 complete place values. place decimal first

5.714

1 mark



The question has been reversed to check understanding of the equals sign.

7

$$\boxed{5,100} = 4,500 + 600$$

$$\begin{array}{r} 4500 \\ + 600 \\ \hline 5100 \\ 1 \end{array}$$

mentally
 $500 + 600 = 1100$
 $4,000 + 1100$
 $= 5,100$

 1 mark

8

$8 \times 33 =$

best method (quickest)

$$\begin{array}{r} 33 \\ \times 8 \\ \hline 264 \\ 2 \end{array}$$

partition mentally
 or $8 \times 30 = 240$
 $8 \times 3 = 24$
 $240 + 24 = 264$

264

 1 mark

9

$72 \div 9 =$

The children shouldn't need a written method as 72 are answer in the 9 times table:

$$\begin{array}{l} 8 \times 9 = 72 \\ \text{so } 72 \div 9 = 8 \end{array}$$

8

 1 mark

10

$167 \times 4 =$

$$\begin{array}{r} 167 \\ \times 4 \\ \hline 668 \\ 22 \end{array}$$

668

 1 mark

11

$4,912 - 824 =$

$$\begin{array}{r} 8 \quad 10 \\ 4912 \\ - 824 \\ \hline 4088 \end{array}$$

$4,088$

 1 mark

12

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

divide top and bottom by 4. to simplify

jottings:

$$\textcircled{1} \begin{array}{r} 5 \quad 2 \\ 62 \\ - 38 \\ \hline 24 \end{array}$$

mentally $+2 + 22 = 24$

$$\textcircled{2} \frac{24}{100} = \frac{6}{25}$$

$\frac{24}{100}$ or $\frac{6}{25}$

 1 mark

both correct.



13

$$\boxed{1,159} - 100 = 1,059$$

↑
this must be 100 more than

$$\text{so } 1,059 + 100$$

↑
this will increase by 1 hundred

1 mark

16

$$30 \times 40 =$$

The children don't need column addition to multiply multiples of 10.

They use the fact $3 \times 4 = 12$ mentally they know

$$\begin{aligned} 30 \times 4 &= 120 \text{ (ten times bigger)} \\ \therefore 30 \times 40 &= 1200 \text{ (ten times bigger)} \end{aligned} \quad \boxed{1200}$$

1 mark

14

$$50 + (36 \div 6) = \quad \text{① } 36 \div 6 = 6 \text{ (we know } 6 \times 6 = 36)$$

$$\quad \quad \quad \text{② } 50 + 6$$

This is testing the BODMAS rule - we need to solve from left to right in the order of BODMAS

B - Brackets, O - order of power of roots,
D - division, M - Multiplication, A - Addition,
S - Subtraction.

$$\boxed{56}$$

1 mark

17

$$581 \div 7 =$$

Bus shelter method

(short division when dividing by a 1-digit number)

$$\begin{array}{r} 7 \overline{) 581} \\ \underline{7 \times 8 = 56} \\ 21 \\ \underline{7 \times 3 = 21} \\ 0 \end{array}$$

7 won't go into 5

$$\boxed{83}$$

1 mark

15

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

multiply the top and the bottom

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

Simplify $\frac{12}{30}$ - divide top and bottom by 6 as 6 divides into both

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

$$\boxed{\frac{12}{30} \text{ or } \frac{2}{5}}$$

1 mark

both correct.

18

$$0.04 \div 10 =$$

Dividing by 10 is making the number 10 times smaller.

The digits in 0.04 move 1 place value to the right.

$$\boxed{0.004}$$

1 mark



19 $2,345 \times 1,000 =$ *

Multiplying by 1,000 makes the number 1,000 times bigger. The digits in 2,345 move 3 place value places to the left.

$$\begin{array}{r} 2345 \\ 2345000 \end{array}$$

2,345,000

fill missing values with zero

1 mark

21 $9 - 3.45 =$ fill missing place values with zero

mentally.

$$\begin{array}{r} 9.00 \\ - 3.45 \\ \hline 5.55 \end{array}$$

put decimal point in first

$$\begin{array}{r} 3.45 + 0.55 = 4 \\ 4 + 5 = 9 \end{array}$$

5.55

1 mark

20

$$\begin{array}{r} 17 \times 14 \\ - 680 \\ \hline 34 \\ - 34 \\ \hline 0 \end{array}$$

two facts related or just double 17.

$$\begin{array}{l} 10 \times 17 = 170 \\ 20 \times 17 = 340 \\ 40 \times 17 = 680 \\ 2 \times 17 = 34 \end{array}$$

double double

40 + 2 groups of 17

42

Show your method

2 marks

22

$$\begin{array}{r} 4781 \\ \times 23 \\ \hline 14343 \\ + 95620 \\ \hline 109963 \end{array}$$

this is zero because the second layer of multiplication starts by multiplying by the tens - 20.

109963

Show your method

2 marks

* we encourage children to not just 'add the zeros'
- for example when multiplying by 1000, the number appears 000 bigger.

When multiplying decimals this doesn't work.
 1.245×1000 does not equal 1.245000

1.245 - it equals 1,245.
1245



23

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

They need a common denominator

we can multiply by 2 to make the denominator 8

$$\frac{6}{8} - \frac{3}{8}$$

$$\frac{3}{8}$$

1 mark

denominator is the bottom number in a fraction

25

$$37.8 - 14.671 =$$

$$\begin{array}{r} 37.\overset{7}{8}\overset{9}{0} \\ - 14.671 \\ \hline 23.129 \end{array}$$

complete empty places with zero.
put in decimal at start of calculating

$$23.129$$

1 mark

24

$$\begin{array}{r} 418 \\ \times 46 \\ \hline 2508 \\ 16720 \\ \hline 19228 \end{array}$$

← same method as question 22

Show your method

$$19,228$$

2 marks

26

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

we need a common denominator
4, 5 and 10 all divide into 20.

$$\frac{5}{20} + \frac{4}{20} + \frac{2}{20} = \frac{11}{20}$$

$$\left. \begin{array}{l} \frac{1}{4} \times 5 \\ \frac{1}{5} \times 4 \\ \frac{1}{10} \times 2 \end{array} \right\}$$

$$\frac{11}{20}$$

1 mark

27

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

4 means $\frac{4}{1}$ as a fraction
we teach the rule to 'kiss and flip' when dividing fractions
kiss - the fraction is turned upside down.

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

$$\frac{4}{20} \text{ simplifies to } \frac{1}{5} \text{ (divide by 4)}$$

$$\frac{4}{20} \text{ or } \frac{1}{5}$$

1 mark



28 $\frac{5}{8} \div 2 =$ * the same as question 27

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

$\frac{5}{16}$ 1 mark

31 7% of 500 = 10% of 500 = 50

1% of 500 = 5

7% of 500 = 7 x 5 = 35

35 1 mark

29 45% of 460 = $\frac{1}{10}$ of 460 = 460 \div 10

10% = 46

40% of 460 = 46 x 4 = 184

1% = 4.6

5% = 4.6 x 5 = 23

184
+ 23

207

207 1 mark

32 $\frac{2}{6} - \frac{1}{8} =$

we need a common denominator
6 and 8 both divide into 24

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

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

$\frac{5}{24}$ 1 mark

30 $2\frac{1}{3} + \frac{5}{6} =$

Common denominator

make improper fraction $2\frac{1}{3} = 2\frac{2}{6} = \frac{14}{6}$

so $\frac{14}{6} + \frac{5}{6} = \frac{19}{6}$

$(2 \times 6 + 2)$

this is why we do this

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

$\frac{19}{6}$ or $3\frac{1}{6}$ 1 mark

Best Method is

→ 50% of 460 = 230 } related facts. 45% of 460 = 460 - 253 = 207

5% of 460 = 23 }
253

460
- 253

207

For Question 29 - there are no marks for working, like all 1 mark questions, so any jottings are fine.



100% of a number \Rightarrow 200

33

$0.9 \times 200 =$ $0.9 = 90\% = \frac{9}{10}$

10% of 200 = 20

$200 - 20 = 90\%$

180

1 mark

34

$15\% \times 1,000 =$

10% of 1,000 = 100 } 150
5% of 1,000 = 50

150

1 mark

35

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

$1 \times 57 = 57$
 $\frac{1}{2} \times 57 = 28.5$
} 57.0
 $+ 28.5$
85.5

$\frac{1}{2}$ of 50 = 25
 $\frac{1}{2}$ of 7 = 3.5

85.5

1 mark

36

38
59 | 8 8 4 2
- 1 7 7 0

3 4 7 2
- 2 9 5

1 6 7 7
- 1 1 8

5 9
- 5 9

0

10 x 59 = 590
20 x 59 = 1180
30 x 59 = 1770
5 x 59 = 295
2 x 59 = 118
1 x 59 = 59

38 groups of 59

Show your method

38

2 marks

