



1 Here are five numbers.

126 245 312 430 594

a. Write down the numbers that are multiples of 9

b. Write down the numbers that are multiples of 6

(2 marks)

a) digits add to a multiple of 9

$$1 + 2 + 6 = 9$$

$$2 + 4 + 5 = 11$$

$$3 + 1 + 2 = 6$$

$$4 + 3 + 0 = 7$$

$$5 + 9 + 4 = 18$$

126 and 594

b) even, and digits add to a multiple of 3

126: even, 9

312: even, 6

594: even, 18

245 is odd, 430 has digit sum 7

126, 312 and 594

2

You are told that $23 \times 14 = 322$

Use this fact to write down the value of

a. 23×140

b. 2.3×14

c. $322 \div 14$

(3 marks)

a) $140 = 14 \times 10$

$322 \times 10 = 3220$

3220

b) $2.3 = 23 \div 10$

$322 \div 10 = 32.2$

32.2

c) division undoes 23×14

23

3

Use the grid method to work out 58×37

(2 marks)

split $58 = 50 + 8$ and $37 = 30 + 7$

$50 \times 30 = 1500$

$50 \times 7 = 350$

$8 \times 30 = 240$

$8 \times 7 = 56$

$1500 + 350 + 240 + 56 = 2146$

2146

4

Work out 34×26

(2 marks)

$34 \times 20 = 680$

$34 \times 6 = 204$

$680 + 204 = 884$

884

5 Work out 4.7×0.3

(2 marks)

Work out $47 \times 3 = 141$

4.7 has 1 decimal place and 0.3 has 1 decimal place, so the answer has 2 decimal places

$$4.7 \times 0.3 = 1.41$$

Compared with 47×3 , both factors were divided by 10. The product is therefore divided by 100: $141 \div 100 = 1.41$

1.41

6 Use short division to work out $1438 \div 6$

- Give your answer with a remainder.
- Give your answer as a mixed number in its simplest form.

(2 marks)

a)

$$6 \text{ into } 14 = 2 \text{ r } 2$$

$$6 \text{ into } 23 = 3 \text{ r } 5$$

$$6 \text{ into } 58 = 9 \text{ r } 4$$

239 r 4

b) remainder 4 out of 6

$$\frac{4}{6} = \frac{2}{3}$$

239 $\frac{2}{3}$

7 Four friends win a prize of £59.40

They share the prize equally.

Work out how much each friend receives.

(2 marks)

Divide £59.40 by 4

$$59.40 \div 4$$

$$4 \times 14 = 56, \text{ remainder } 3.40$$

$$3.40 \div 4 = 0.85, \text{ so each friend receives } \pounds 14.85$$

£14.85

8 Use long division to work out $7854 \div 22$

(3 marks)

$$22 \text{ into } 78 = 3$$

$$78 - 66 = 12$$

bring down the 5

$$22 \text{ into } 125 = 5$$

$$125 - 110 = 15$$

bring down the 4

$$22 \text{ into } 154 = 7$$

$$154 - 154 = 0$$

check: $357 \times 22 = 7854$

357

9 460 pupils are going on a school trip.

Each coach can carry 52 pupils.

Work out the smallest number of coaches needed for the trip.

(3 marks)

$$460 \div 52 = 8.84... \text{ so 8 coaches are not enough}$$

$$8 \times 52 = 416, \text{ which leaves } 460 - 416 = 44 \text{ pupils without a seat}$$

$$9 \text{ coaches are needed } (9 \times 52 = 468 \text{ seats})$$

9

10 Pens cost £2.35 each.

Priya has £30 to spend on pens.

Work out the greatest number of pens Priya can buy.

(3 marks)

$$£30 \div £2.35 = 12.76... \text{ so try 12 pens}$$

$$12 \times £2.35 = £28.20, \text{ which is within } £30$$

$$13 \times £2.35 = £30.55, \text{ which is too much}$$

The greatest number of pens is 12

12

11

At the school tuck shop, Callum buys 6 cereal bars at 74p each and 3 drinks at £1.15 each.

He pays with a £10 note.

How much change should he get?

(3 marks)

$$6 \times 74 = 444p = £4.44$$

$$3 \times 1.15 = £3.45$$

$$4.44 + 3.45 = 7.89$$

$$10.00 - 7.89 = 2.11$$

$$£2.11$$

12

A school orders 28 boxes of pencils.

Each box holds 144 pencils.

The pencils are shared equally between 9 classes.

How many pencils does each class get?

(3 marks)

total number of pencils

$$144 \times 28 = 144 \times 20 + 144 \times 8$$

$$= 2880 + 1152$$

$$= 4032$$

share between 9 classes

$$4032 \div 9 = 448$$

$$448 \text{ pencils}$$