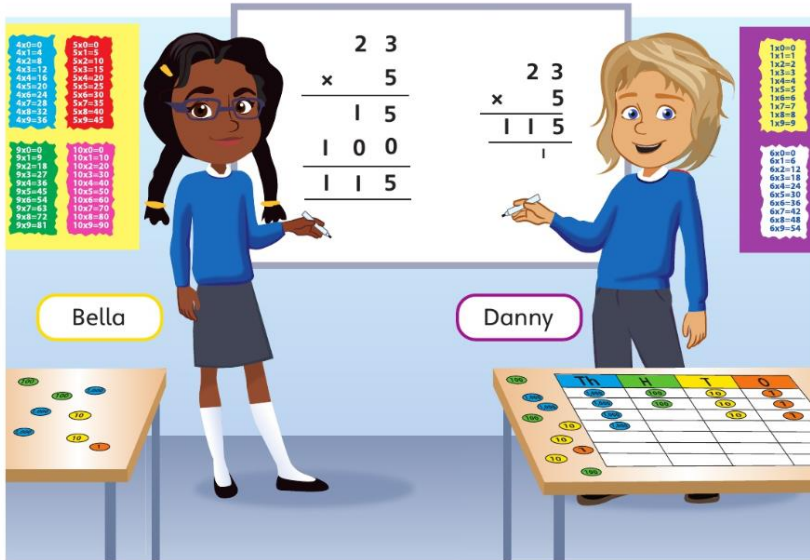# Contents

This tells you which page you need.

The first page of a lesson is a maths problem. Don't look at the next page until you have had a go! The third and fourth pages give you practice, so you can check your understanding.

Multiplying a 2-digit number by a 1-digit number

Discover

Bella

Danny

1 **a)** Danny and Bella have used different methods to work out 23 × 5.

What is the same and what is different about the two methods?

b) Use place value counters to show what Danny has done.

Share

a) Both methods use columns. Both methods give the same answer. Bella has used long (expanded) multiplication, but Danny has used short (single line) multiplication.
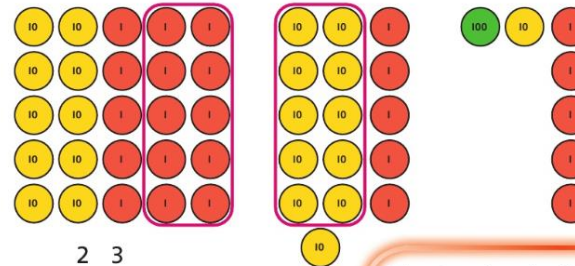
I think Danny has gone wrong. He has missed a step!

No, I can see what he has done. He has just done it all in one line. It is quicker that way.

b) This shows the calculation 23 × 5.

There are 5 rows with 23 in each row.

The 1 under the line represents the extra 10 that is made when an exchange is done.
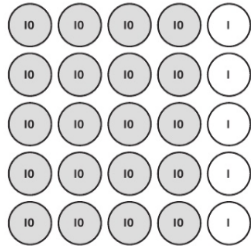
11 tens and 5 ones = 1 hundred, 1 ten and 5 ones

So, 23 × 5 = 115

Multiplying a 2-digit number by a 1-digit number

1 The place value counters show a multiplication.

10	10	10	10	1
10	10	10	10	1
10	10	10	10	1
10	10	10	10	1
10	10	10	10	1

Complete the multiplication and then find the answer.

```
    4 1
×
  _____
```

☐ × ☐ = ☐

2 Fill in the missing numbers.

a)
```
    5 3
×     6
  _____
```

c)
```
    2 9
×     4
  _____
```

b)
```
    4 7
×     3
  _____
```

d)
```
    2 2
×     8
  _____
```

I am going to use counters to check my answers.

3 Work out the answers to these multiplications.

a) 28 × 5 = ☐

c) 64 × 9 = ☐

b) 37 × 4 = ☐

d) 7 × 32 = ☐

4 Each day Amal travels 54 km to and from work. How many kilometres does he travel in 5 days?

Amal travels ☐ km in 5 days.

5 Lee has made a mistake working out 54 × 6.

```
    5 4
×     6
  _____
  3 0 2 4
```

Thinking about place value columns might help me to explain this mistake.

Explain the mistake Lee has made.

_____

_____

_____

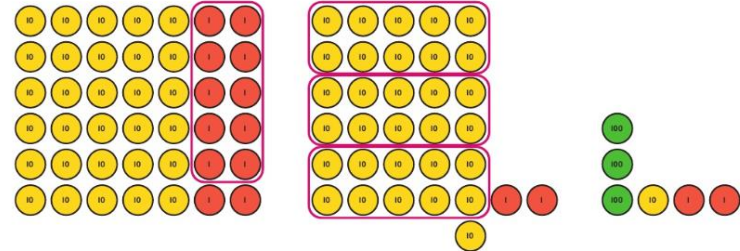# Multiplying a 3-digit number by a 1-digit number

Discover

Row A:
Seats 1–52

1 a) There are 6 rows of seats in each section. Each row has 52 seats.

   How many seats are there in a section?

   b) There are 3 sections in the stadium.

   How many seats are there in total?

Share

a) There are 6 rows of seats in each section.

$$\begin{array}{r} 5\ 2 \\ \times\quad\ 6 \\ \hline 3\ 1\ 2 \\ {\scriptstyle 1} \end{array}$$

> I wonder if I could use this method to multiply a 3-digit number by a 1-digit number.

$6 \times 52 = 312$

There are 312 seats in a section.

b) There are 3 sections in the stadium. Each section contains 312 seats.

$$\begin{array}{r} 3\ 1\ 2 \\ \times\quad\ 3 \\ \hline 9\ 3\ 6 \end{array}$$

$312 \times 3 = 936$

There are 936 seats in total.

Multiplying a 3-digit number by a 1-digit number

1 The place value counters show a multiplication. Work out the answer to the multiplication.

⑩⑩⑩⑩①①①①
⑩⑩⑩⑩①①①①

```
  1 3 4
×     2
_____
```

☐ × ☐ = ☐

2 Complete the multiplications.

a)
```
  2 1 3
×     4
_____
```

b)
```
  1 1 4
×     5
_____
```

c)
```
  1 1 5
×     4
_____
```

d)
```
  1 4 8
×     3
_____
```

e)
```
  2 5 2
×     7
_____
```

f)
```
  3 1 8
×     6
_____
```

3 Work out the answers to these multiplications.

a) 122 × 6 = ☐

c) 270 × 3 = ☐

b) 215 × 5 = ☐

d) 4 × 624 = ☐

4 Find the missing numbers.

a)
```
  2   3
×     5
_____
1 4 6
    1
```

b)
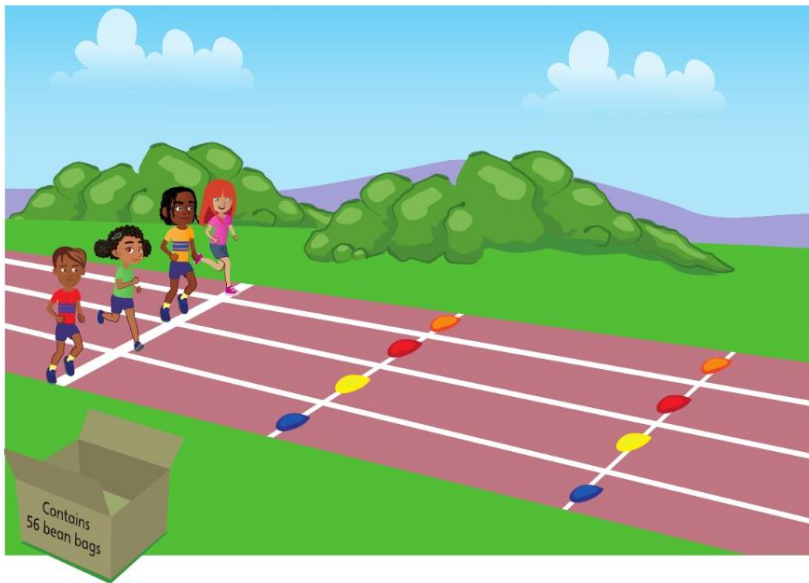```
  5 1 6
×
_____
    1 2
```

**5** A bar of soap weighs 145 g

How much do 8 of these bars weigh?

8 bars of soap weigh ☐ g.

SOAP
145 g

# Dividing a 2-digit number by a 1-digit number
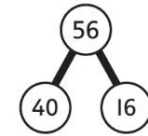
## Discover



Contains 56 bean bags

1 **a)** 56 bean bags have been used. There is an equal number of bean bags in each lane. How many bean bags are in each lane?

**b)** There is a bean bag every 10 metres in each lane.
How far is the furthest bean bag away from the start line?

## Share

**a)** There are 56 bean bags altogether.
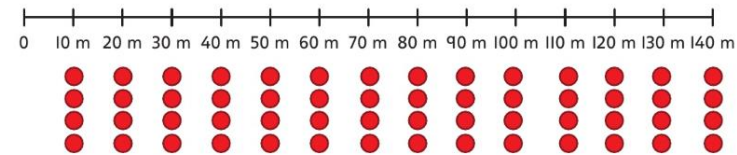
There are 4 running lanes.

$56 \div 4 = ?$



$40 \div 4 = 10$            $16 \div 4 = 4$

So, $56 \div 4 = 14$

There are 14 bean bags in each lane.

**b)** The first bean bag is 10 metres away from the start line.
The bean bags are then 10 metres apart.



0    10 m   20 m   30 m   40 m   50 m   60 m   70 m   80 m   90 m   100 m   110 m   120 m   130 m   140 m

There are 14 bean bags in each lane.

There is one bean bag every 10 metres.

$14 \times 10 = 140$

The furthest bean bag is 140 metres away from the start line.

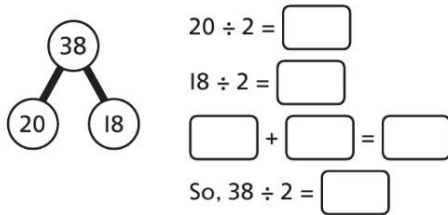I thought the answer was 130 metres. I put the first bean bag at the start.

# Dividing a 2-digit number by a 1-digit number

**1** Lexi has 38 cakes.

She shares them between herself and her friend.

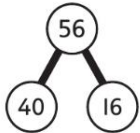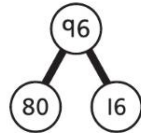How many cakes do they each get?

38
20    18

$20 \div 2 = \boxed{\phantom{0}}$

$18 \div 2 = \boxed{\phantom{0}}$

$\boxed{\phantom{0}} + \boxed{\phantom{0}} = \boxed{\phantom{0}}$

So, $38 \div 2 = \boxed{\phantom{0}}$

They each get $\boxed{\phantom{0}}$ cakes.

**2** Work out the following calculations.

**a)** $56 \div 4 = \boxed{\phantom{0}}$

56
40    16

**b)** $45 \div 3 = \boxed{\phantom{0}}$

45
30    15

**c)** $96 \div 4 = \boxed{\phantom{0}}$

96
80    16

**d)** $76 \div 2 = \boxed{\phantom{0}}$

76
16    60
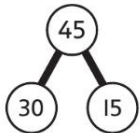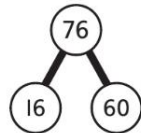
**3** Partition each number to help you to work out the division.

**a)** $58 \div 2 = \boxed{\phantom{0}}$

58

**b)** $65 \div 5 = \boxed{\phantom{0}}$
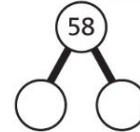
65
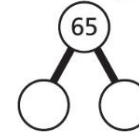
**4** Find answers to the following calculations.

**a)** $48 \div 3 = \boxed{\phantom{0}}$

**c)** $91 \div 7 = \boxed{\phantom{0}}$

**b)** $92 \div 4 = \boxed{\phantom{0}}$

**d)** $85 \div 5 = \boxed{\phantom{0}}$

**5** Tilly has 75 bulbs. She plants 3 bulbs in each plant pot.

How many plant pots does she need?

Tilly needs $\boxed{\phantom{0}}$ plant pots.

# Dividing a 3-digit number by a 1-digit number

## Discover



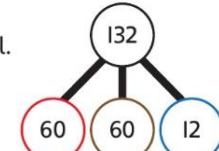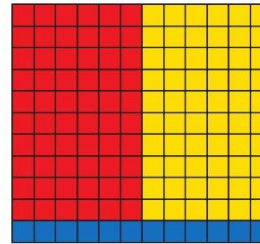Each sheep needs 3 squares to graze on.
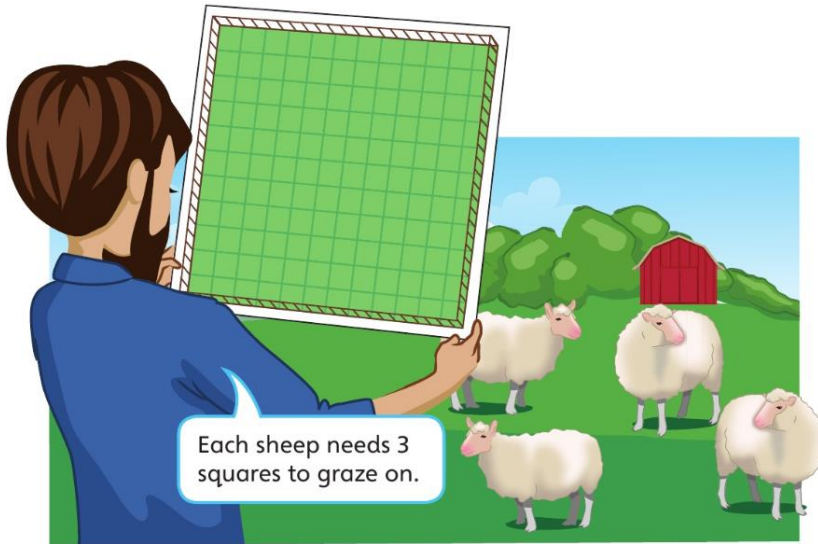
**1** **a)** How many sheep can graze in the farmer's field?

**b)** A cow needs 4 squares to graze on.

How many cows can graze in the field?

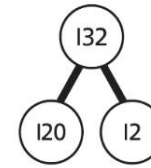## Share

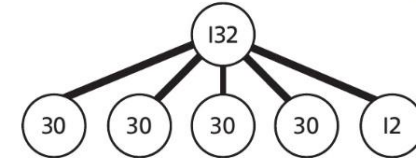**a)** $11 \times 12 = 132$

There are 132 squares in total.



$20 + 20 + 4 = 44$

44 sheep can graze in the farmer's field.

132

60    60    12

$60 \div 3 = 20$   $60 \div 3 = 20$   $12 \div 3 = 4$

$132 \div 3 = 44$

132

120    12

$120 \div 3 = 40$    $12 \div 3 = 4$
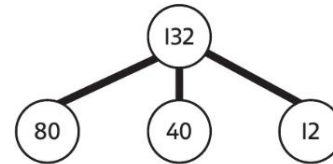
132

30    30    30    30    12

$30 \div 3 = 10$  $30 \div 3 = 10$  $30 \div 3 = 10$  $30 \div 3 = 10$  $12 \div 3 = 4$

I partitioned the number of squares in different ways. I got the same answer each time.

**b)**

132

80    40    12

$80 \div 4 = 20$   $40 \div 4 = 10$   $12 \div 4 = 3$

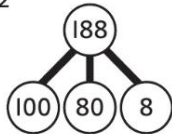$132 \div 4 = 33$

33 cows can graze in the field.

# Dividing a 3-digit number by a 1-digit number

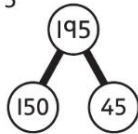**1** Work out these calculations using the part-whole models.

**a)** 188 ÷ 2

(188)
(100) (80) (8)

100 ÷ 2 = ☐   80 ÷ 2 = ☐

8 ÷ 2 = ☐

☐ + ☐ + ☐ = ☐

So, 188 ÷ 2 = ☐

**c)** 195 ÷ 5

(195)
(150) (45)

150 ÷ 5 = ☐   45 ÷ 5 = ☐

☐ + ☐ = ☐

So, 195 ÷ 5 = ☐

**b)** 189 ÷ 3

(189)
(180) (9)
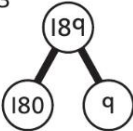
180 ÷ 3 = ☐   9 ÷ 3 = ☐

☐ + ☐ = ☐

So, 189 ÷ 3 = ☐

**d)** 275 ÷ 5

(275)
(250) (25)
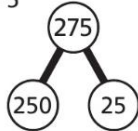
250 ÷ 5 = ☐   25 ÷ 5 = ☐

☐ + ☐ = ☐

So, 275 ÷ 5 = ☐

**2** Complete the part-whole models and then complete the divisions.

**a)** 128 ÷ 2 = ☐

(128)
(100) (○) (○)

**b)** 128 ÷ 2 = ☐

(128)
(100) (○)

**c)** 156 ÷ 3 = ☐

(156)
(150) (○)

**d)** 256 ÷ 4 = ☐

(256)
(240) (○)

**3** Find answers to the following calculations.

**a)** 185 ÷ 5 = ☐

**b)** 264 ÷ 6 = ☐

**c)** 312 ÷ 2 = ☐

**d)** 372 ÷ 3 = ☐