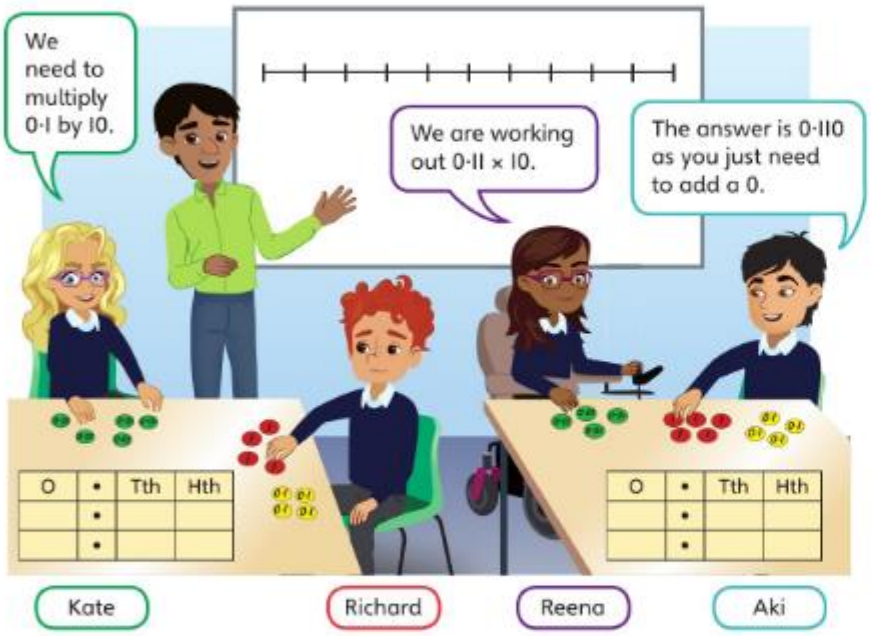
Monday 18/5/2020 Year 5 Modelled Examples Unit 12 Lesson 12

Spend about 20-30 minutes discussing these Powerpoint examples with your parent/carers before having a go at your independent work in your exercise books.

Multiplying decimals by 10

Discover



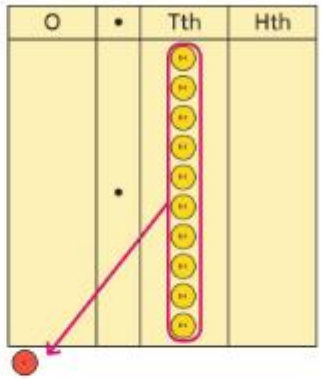
1 a) What is the answer to Kate and Richard's multiplication?

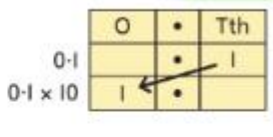
b) What mistake has Aki made?

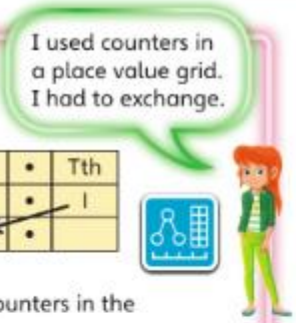
What is the correct answer to Reena and Aki's multiplication?

Share

a) Kate and Richard need to multiply 0·1 by 10.







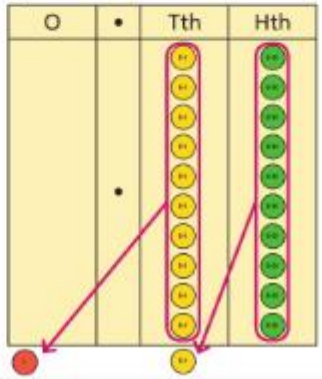
Place ten 0·1 counters in the tenths column.

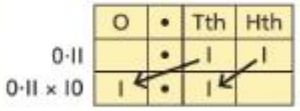
Exchange ten 0·1 counters for one 1 counter.

0·1 × 10 = 1

The answer to Kate and Richard's multiplication is 1.

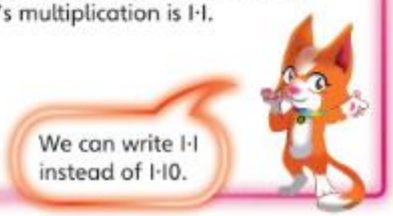
b) Aki thinks when you multiply by 10 you add a 0 to the end because this is what it looks like happens when you multiply a whole number by 10. This is incorrect.





0·11 × 10 = 1·1

The correct answer to Reena and Aki's multiplication is 1·1.



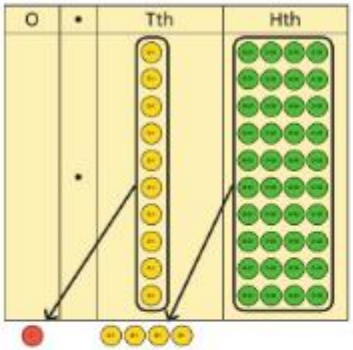
Discuss with your carers then complete the activities in your maths book 5C p39

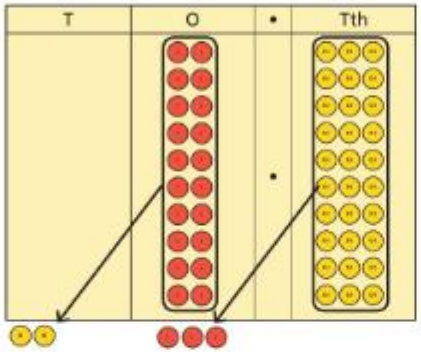
Think together

1 Use the counters and a place value grid to work out these multiplications.

a) 0·14 × 10 = ☐

b) 2·3 × 10 = ☐





2 Multiply each of these numbers by 10.

a)

T	O	•	Tth	Hth
	3	•	7	
		•		

c)

T	O	•	Tth	Hth
	2	•	3	9
		•		

b)

T	O	•	Tth	Hth
	4	•	5	
		•		

d)

T	O	•	Tth	Hth	Thth
	0	•	1	9	6
		•			

3 Complete the multiplications.

a) 0·1 × 10 = ☐
1·2 × 10 = ☐
5·7 × 10 = ☐
19·1 × 10 = ☐

b) 0·72 × 10 = ☐
1·25 × 10 = ☐
5·71 × 10 = ☐
19·16 × 10 = ☐

c) 0·256 × 10 = ☐
1·256 × 10 = ☐
31·126 × 10 = ☐

d) With a partner, look at the digits in each number that is being multiplied by 10.

What do you notice about the digits in the answers?
What is the same and what is different?

4 Find the missing numbers in these multiplications.

CHALLENGE

a) 10 × 3·9 = ☐
b) 10 × 11·6 = ☐
c) ☐ × 10 = 4·56
d) ☐ × 10 = 12·62
e) ☐ × 10 = 3·2
f) ☐ × 10 = 15·86

I can multiply numbers by 10 without using counters and a place value grid.

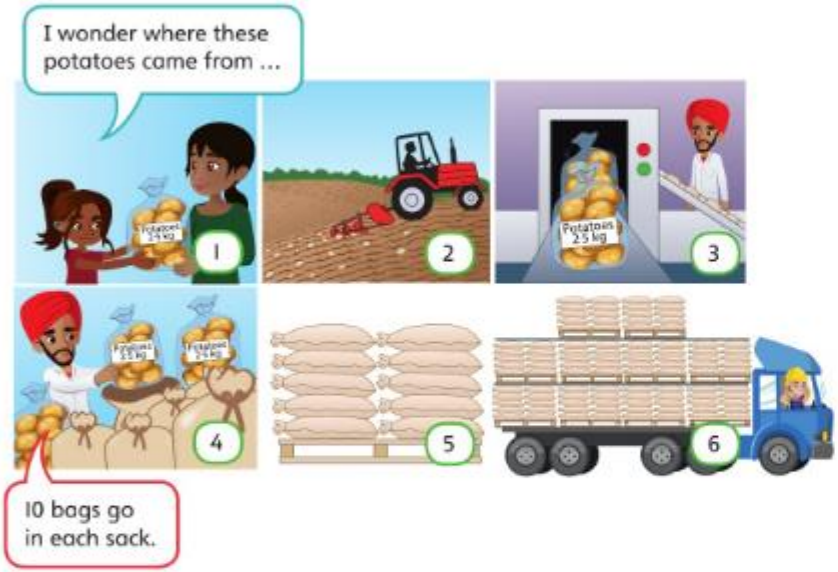
I notice that when I multiply by 10, the digits move 1 place to the left. I wonder if this always happens.

Tuesday 19/5/2020 Year 5 Modelled Examples Unit 12 Lesson 13

Spend about 20-30 minutes discussing these Powerpoint examples with your parent/carers before having a go at your independent work in your exercise books.

Multiplying decimals by 10, 100 and 1,000

Discover



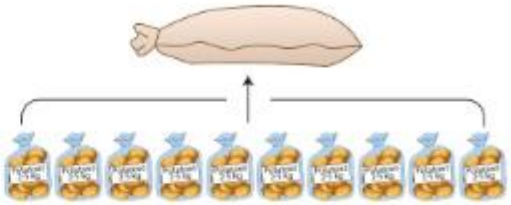
1 a) How many 2·5 kg bags of potatoes are on a pallet?

What is the total mass of all the bags on one pallet?

b) What is the mass of all the potatoes on the lorry?

Share

a) A bag contains 2·5 kg of potatoes. There are 10 bags in a sack.



T	O	•	Tth	Hth
	2	•	5	
2	5	•		

2·5 × 10 = 25 kg. The mass of each sack is 25 kg.

There are 10 sacks of potatoes on each pallet.

There are 10 bags in each sack.

10 × 10 = 100

There are 100 2·5 kg bags on a pallet.

We need to put a 0 to keep the place value of the number.

H	T	O	•	Tth
		2	•	5
2	5	0	•	

The total mass of all the bags on one pallet is 250 kg.

I multiplied by 10 as there are 10 bags in a sack. I then multiplied by 10 again as there are 10 sacks on a pallet. This is the same as multiplying by 100.

Discuss with your carers then complete the activities in your maths book 5C p42

b) There are 10 pallets on the lorry.

	Th	H	T	O	•	Tth
2·5 × 10 = 25				2	•	5
2·5 × 100 = 250			2	5	•	
2·5 × 1,000 = 2,500		2	5	0	•	
	2	5	0	0	•	

When multiplying by 100, the digits move two places to the left. When multiplying by 1,000, the digits move three places to the left.

Multiplying by 1,000 is the same as multiplying by 10, then 10 and then 10 again.

So 2·5 × 1,000 is the same as 2·5 × 10 × 10 × 10 = 2,500 kg.
The mass of all the potatoes on the lorry is 2,500 kg.

Think together

1 Draw a place value grid and find the answers.

	Th	H	T	O	•	Tth
3·7 × 10 = ☐				3	•	7
3·7 × 100 = ☐					•	
3·7 × 1,000 = ☐					•	

2 Use a place value grid to help you complete the multiplications.

Th	H	T	O	•	Tth	Hth	Thth
				•			
				•			
				•			

a) 1·72 × 10 = ☐
1·72 × 100 = ☐
1·72 × 1,000 = ☐

b) 4·13 × 1,000 = ☐
0·413 × 1,000 = ☐
0·041 × 1,000 = ☐

c) 39·3 × 100 = ☐
3·93 × 100 = ☐
0·393 × 100 = ☐

3 Can you find an efficient method to work out the answers?

CHALLENGE

Explain your method.

0·12 × 100	7·35 × 100	16·9 × 100	0·384 × 100
0·12 × 1,000	7·35 × 1,000	16·9 × 1,000	0·384 × 1,000

I can work out how many place value columns my digits need to move.

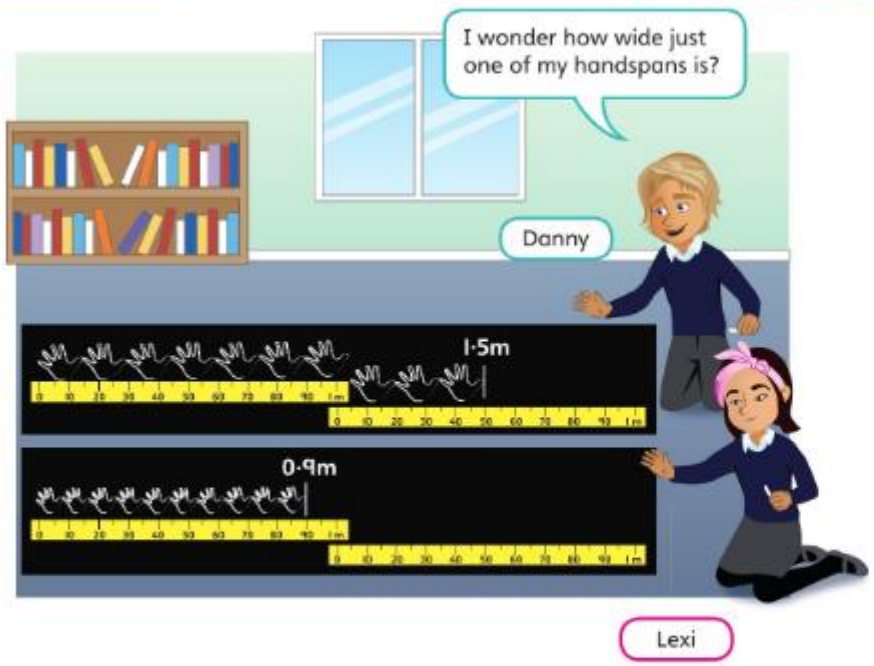
I notice that when I multiply by 100, I always move the digits the same number of places.

Wednesday 20/5/2020 Year 5 Modelled Examples Unit 12 Lesson 14

Spend about 20-30 minutes discussing these Powerpoint examples with your parent/carers before having a go at your independent work in your exercise books.

Dividing decimals by 10

Discover

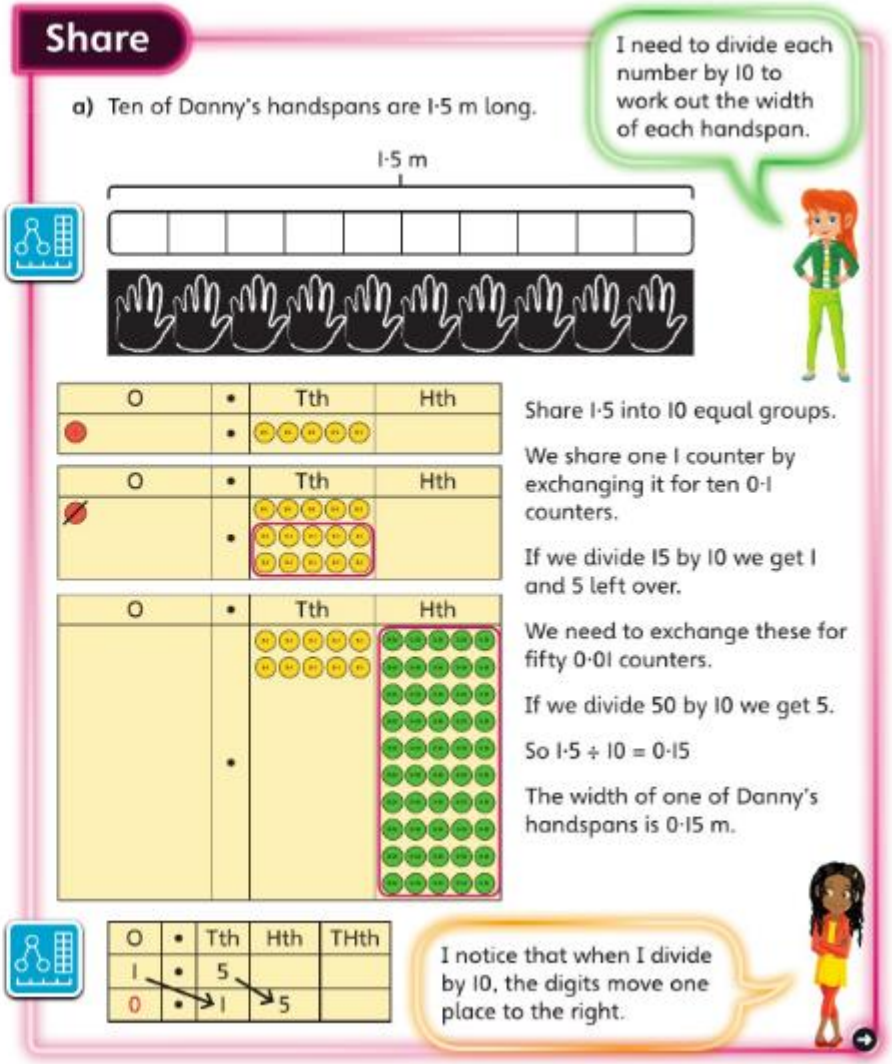


1 a) What is the width of one of Danny's handspans in metres?

b) In metres, how much narrower is Lexi's handspan than Danny's?

Share

a) Ten of Danny's handspans are 1·5 m long.



Discuss with your carers then complete the activities in your maths book 5C p45

b) Ten of Lexi's handspans are 0·9 metres wide in total.

0·9 ÷ 10 = 0·09

One of Lexi's handspans is 0·09 m wide.

0·15 – 0·09 = 0·06

Lexi's handspan is 0·06 m narrower than Danny's.

O	•	Tth	Hth
0	•	9	
0	•	0	9

I worked out the difference of the 10 handspans first and got 0·6. Then I divided 0·6 by 10.

The zeros are important as they ensure the other digits are in the correct columns.

Think together

1 Toshi makes a line of 10 footsteps.

2·6 metres

How long is each of Toshi's footsteps in metres?

O	•	Tth	Hth
	•		

O	•	Tth	Hth
2	•	6	
	•		

Each of Toshi's footsteps is ☐ m.

2 Work out the missing numbers.

H	T	O	•	Tth	Hth	Thth
			•			
			•			

a) 0·92 ÷ 10 = ☐

b) 53·6 ÷ 10 = ☐

c) 95 ÷ 10 = ☐

d) ☐ ÷ 10 = 5·86

e) 89·02 ÷ 10 = ☐

f) ☐ ÷ 10 = 1·002

3 Use the pictures to answer the questions.

CHALLENGE

a) Danny mixes the water and squash. He shares it equally between 10 glasses.

How much drink is in each glass?

b) How much does 100 ml of milk cost? What about 200 ml?

c) The rice is shared between 20 saucepans.

How much rice is in each saucepan?

I know there are 10 equal parts of 100 ml in 1 litre.

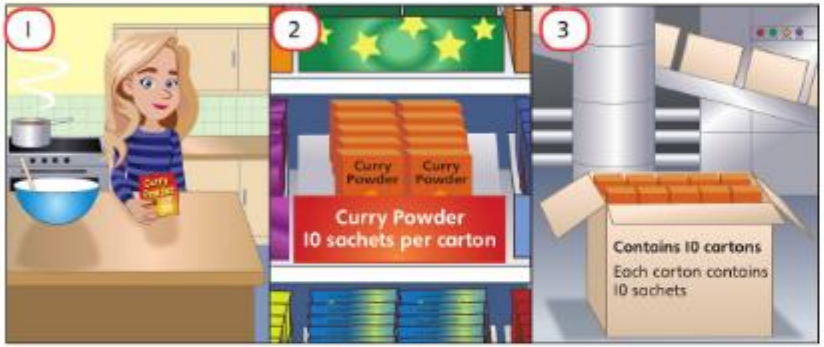
I think I can put half the rice in 10 pans and work it out from there.

Thursday 21/5/2020 Year 5 Modelled Examples Unit 12 Lesson 15

Spend about 20-30 minutes discussing these Powerpoint examples with your parent/carers before having a go at your independent work in your exercise books.

Dividing decimals by 10, 100 and 1,000

Discover



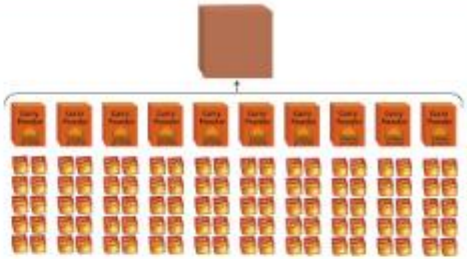
1 a) How many sachets of curry powder are in the large box?

b) The total mass of the curry power in the large box is 8·5 kg.

How many kilograms of curry powder is in each sachet?

Share

a) There are 10 sachets in each carton. There are 10 cartons in each large box.



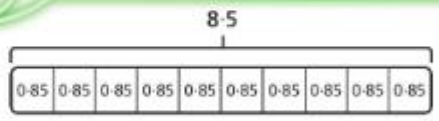
10 × 10 = 100

There are 100 sachets of curry powder in the large box.

b) The total mass of the large box is 8·5 kg.

Method 1

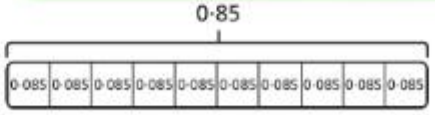
I divided by 10 to work out how much is in each carton.



O	•	Tth	Hth	Thth
8	•	5		
0	•	8	5	

8·5 ÷ 10 = 0·85

I divided by 10 again to work out how much curry is in each sachet.



O	•	Tth	Hth	Thth
0	•	8	5	
0	•	0	8	5

0·85 ÷ 10 = 0·085

There is 0·085 kg of curry powder in each sachet.

Discuss with your carers then complete the activities in your maths book 5C p48

Method 2

I divided by 100 instead as there are 100 sachets in the large box.

O	•	Tth	Hth	Thth
8	•	5		
0	•	0 →	8 →	5

When dividing by 100, the digits move 2 places to the right.

Dividing by 100 is the same as dividing by 10 and 10 again.

There is 0·085 kg of curry powder in each sachet.

Think together

1 Divide each of these numbers or amounts by 100.

H	T	O	•	Tth	Hth	Thth
			•			
			•			

12·8 kg ÷ 100 = ☐

2·52 m ÷ 100 = ☐

128 ÷ 100 = ☐

0·9 ÷ 100 = ☐

2 The milk is used in a recipe for 100 scones.

How much milk is in each scone?

☐ ÷ ☐ = ☐

There is ☐ l of milk in each scone.

3 Divide each of these numbers or amounts by 1,000.

a) 12 **b)** 6·2 **c)** 718 km **d)** 0·7

4 In a bakery there is a trolley that holds 10 trays.

Each tray contains 10 loaves of bread.

Each loaf of bread is cut into 10 equal slices.

a) If the total mass of all the bread on a trolley is 46 kg, how much does a single slice weigh?

Explain your method.

b) What rule can you think of to show your method?

I will work out the number of slices and then divide the amount by this.

I will work out the mass of the loaves on a tray, then the mass of each loaf and then the mass of each slice.

Friday 22/5/2020 Year 5 Modelled Examples Unit 12 Unit Check

Discuss how you would solve these with your carer if you can. Then try the White Rose Maths Quiz to see how much you have learnt in this unit.

End of unit check

1 What is the answer when these two numbers are added together?

2·53	3·64

A 5·17 B 5·117 C 6·17 D 6·67

2 What is 0·35 subtracted from 15·6?

A 12·1 B 15·25 C 15·35 D 15·95

3 Which of the following is **not** equivalent to 5 – 3·45?

A 6 – 4·45 B 4·99 – 3·46 C 4·99 – 3·44 D 4·98 – 3·43

4 What is the answer to 0·2 × 100?

A 0·02 B 0·2 C 2 D 20

5 Which of these calculations is equal to 0·015?

A 15 ÷ 1,000 B 0·15 × 10 C 1·5 ÷ 10 D 15 × 100

6 Which statement is false?

A When you multiply by 10, the digits move 1 place to the left.

B When you multiply by 100, the digits move 2 places to the right.

C When you divide by 10, the digits move 1 place to the right.

D When you divide by 1,000, the digits move 3 places to the right.

7 A tube contains two tennis balls.

Each tennis balls weighs 0·16 kg.

The total mass of the tube and two balls is 0·5 kg.

What is the mass of the empty tube?

8 A, B and C are plotted on a number line.

The difference between A and B is 3·5.

The difference between A and C is 10 times the difference between A and B.

What are the values of B and C?

Follow the link to complete the quiz: https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/04/2019/04/2019/04/Year-5-Decimals.pdf

Answers: https://wrm-13b48.kxcdn.com/wp-content/uploads/2019/05/Year-5-Decimals-Answers.pdf