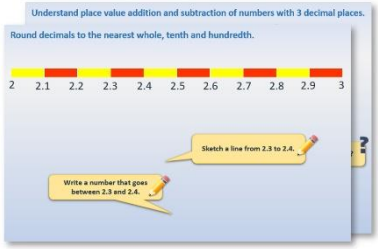
Year 4: Week 1, Day 2

Multiply and divide by 10 and 100

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the **Learning Reminders**.
   They come from our *PowerPoint* slides.



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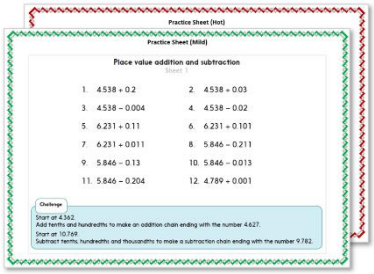
2. Tackle the questions on the **Practice Sheet**.
   There might be a choice of either Mild (easier) or Hot (harder)!
   Check the answers.



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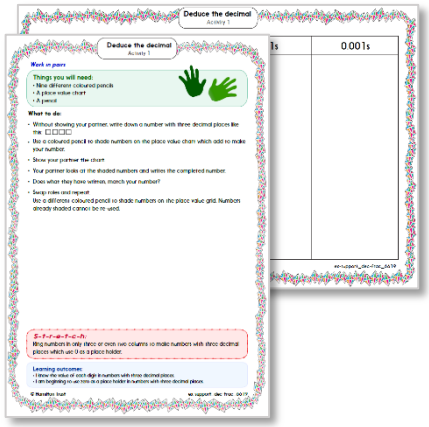
3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**



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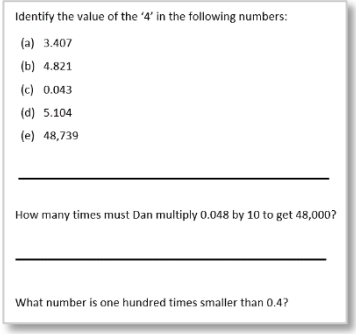
4. Have I mastered the topic? A few questions to **Check your understanding**.
   Fold the page to hide the answers!



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Learning Reminders

Multiply and divide by 10 and 100 using 1-place decimals.

1000s	100s	10s	1s	.	0.1s
		2	4		
2	4	0	0		
	2	4	0		
		2	4		

Let's multiply **24 by 100** on this place value grid...

What is the place value of the **2** now? And the **4?**
Each digit is worth **100 times** its previous value and has moved TWO PLACES TO THE LEFT.

What will happen to 2400 if **divide by 10?**

And **divide by 10 again?**

We get back to 24.
Can you explain why?

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Learning Reminders

Multiply and divide by 10 and 100 using 1-place decimals.

1000s	100s	10s	1s	0.1s
			4	9
	4	9	0	

What is 4.9 × 100?

The digits moved 2 places to the left.

How can we get back to 4.9?

Divide by 100!
Multiplication and division are **inverse operations.**

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Learning Reminders

Multiply and divide by 10 and 100 using 1-place decimals.

1000s	100s	10s	1s	0.1s
	2	8	0	
			2	8

What is 280 ÷ 100?

Digit move two places to the right.

What can we do to 2.8 to get to 28?

Multiply by 10!

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Practice Sheet Mild

Multiplying and dividing by 10 and 100

34 x 10

34 x 100

3.4 x 10

3.4 x 100

650 ÷ 10

650 ÷ 100

72 ÷ 10

7 ÷ 10

800 ÷ 100

80 ÷ 100

4.5 x ☐ = 45

4.5 x ☐ = 450

270 ÷ ☐ = 2.7

270 ÷ ☐ = 27

Challenge

3.6 x ☐ x ☐ = 360

940 ÷ ☐ ÷ ☐ = 9.4

72 x ☐ ÷ ☐ = 7.2

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Practice Sheet Hot

Multiplying and dividing by 10 and 100

4.8 x 10 = ☐

36 ÷ 10 = ☐

270 ÷ 100 = ☐

0.6 x 100 = ☐

Complete these 'balancing' calculations.

4 x 10 x 10 = 4 x ☐

65 x 100 ÷ 10 = 65 x ☐

280 ÷ 10 ÷ 10 = 280 ÷ ☐

760 ÷ 100 x 10 = 760 ÷ ☐

4.5 x ☐ = 4.5 x 10 x 10

3.7 x ☐ ÷ 10 = 3.7 x 10

600 ÷ ☐ ÷ 10 = 6 ÷ 10

0.7 x 100 ÷ ☐ = 0.7 x 10

Challenge

With a partner, write some of your own balancing calculations that involve multiplying and dividing by 10 and 100.

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Practice Sheets Answers

Multiplying and dividing by 10 and 100 (mild)

34 x 10 = 340
3.4 x 10 = 34
650 ÷ 10 = 65
72 ÷ 10 = 7.2
800 ÷ 100 = 8
4.5 x 10 = 45
270 ÷ 100 = 2.7

34 x 100 = 3400
3.4 x 100 = 340
650 ÷ 100 = 6.5
7 ÷ 10 = 0.7
80 ÷ 100 = 0.8
4.5 x 100 = 450
270 ÷ 10 = 27

Challenge

3.6 x 10 x 10 = 360

940 ÷ 10 ÷ 10 = 9.4

72 x 10 ÷ 100 = 7.2

Multiplying and dividing by 10 and 100 (hot)

4.8 x 10 = 48
36 ÷ 10 = 3.6
270 ÷ 100 = 2.7
0.6 x 100 = 60

4 x 10 x 10 = 4 x 100
65 x 100 ÷ 10 = 65 x 10
280 ÷ 10 ÷ 10 = 280 ÷ 100
760 ÷ 100 x 10 = 760 ÷ 10

4.5 x 100 = 4.5 x 10 x 10
3.7 x 100 ÷ 10 = 3.7 x 10
600 ÷ 100 ÷ 10 = 6 ÷ 10
0.7 x 100 ÷ 10 = 0.7 x 10

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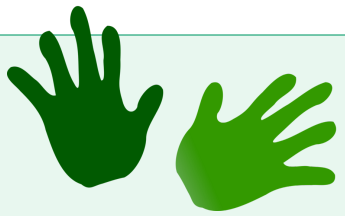
A Bit Stuck?
Digit dance

Play in pairs

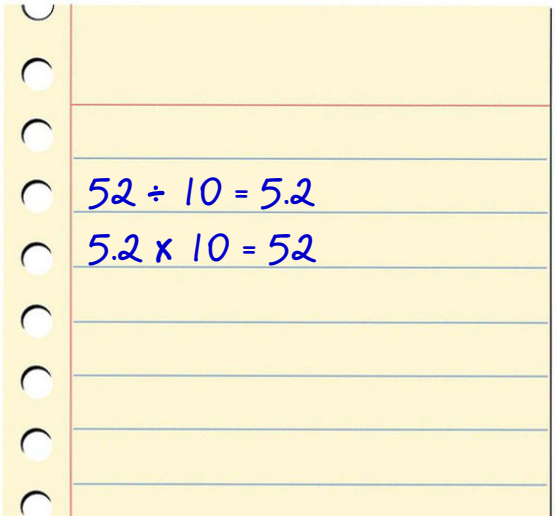
Things you will need:

- A place value grid
- 1 to 9 digit cards
- A pencil



What to do:

- Take it in turns to shuffle the 1 to 9 digit cards.
- Take two and make a 2-digit whole number.
- Put the number in your place value grid.
- Divide your number by 10.
  Write the division sentence.
- Now work out what multiplication is needed to move the digits back to where they started. Write the multiplication.
- How many pairs of number sentences can you write before time is up?



S-t-r-e-t-c-h:

Work out these mystery decimals.

☐.☐ x 10 = 45 ☐.☐ x 10 = 6

Learning outcomes:

- I can divide whole numbers by 10 to give numbers with one decimal place understanding which way digits will move.
- I can multiply numbers with one decimal place by 10.
- I am beginning to write multiplications which are the inverses of divisions.

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A Bit Stuck?

Digit dance

10s	1s	•	0.1s

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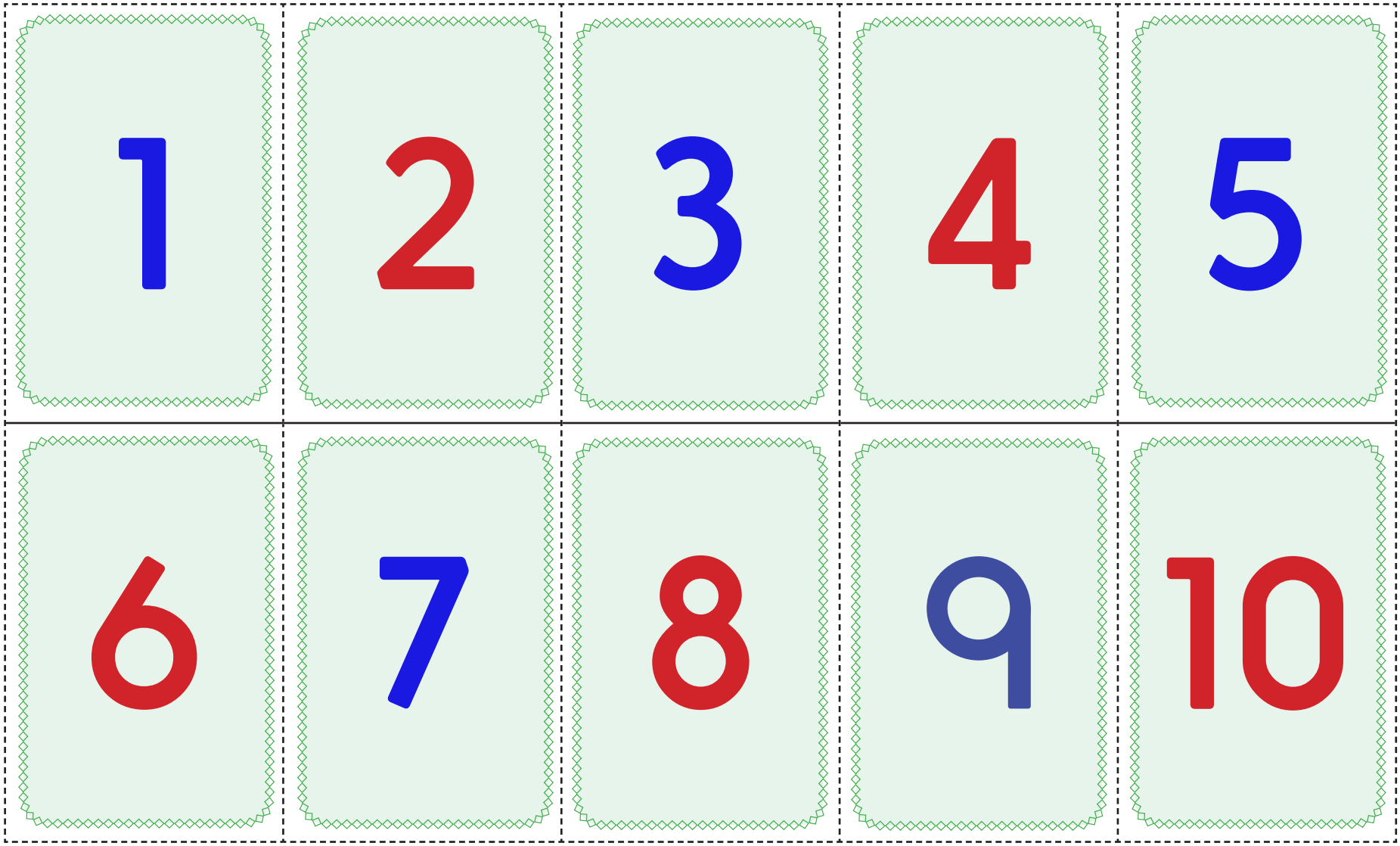

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Check your understanding

Questions

Write the value of ten times each number.

(a) 3.4

(b) 6.2

(c) 0.8

(d) 1.1

Write the value of one tenth of each number.

(a) 57

(b) 84

(c) 6

(d) 13

Use this fact 56 = 7 x 8 to find the answer to:

(a) 7 x 80

(b) 7 x 0.8

(c) 7 x 800

(d) 560 ÷ 8

Fold here to hide answers

Check your understanding

Answers

Write the value of ten times each number.

(a) 3.4 34

(b) 6.2 62

(c) 0.8 8

(d) 1.1 11

Check these and subsequent questions on a place value grid. Children answering 3.40, 6.20 etc are mistakenly 'adding a zero' when multiplying by 10.

Write the value of one tenth of each number.

(a) 57 5.7

(b) 84 8.4

(c) 6 0.6

(d) 13 1.3

Use this fact 56 = 7 x 8 to find the answer to:

(a) 7 x 80 560 (10 times greater).

(b) 7 x 0.8 5.6 (10 times smaller).

(c) 7 x 800 5600 (100 times greater).

(d) 560 ÷ 8 70, since 56 ÷ 8 = 7.

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