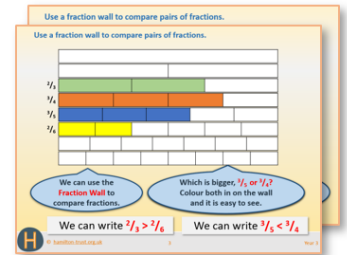


Week 8, Day 1

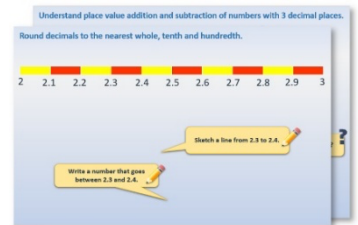
Grid multiplication (1)

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

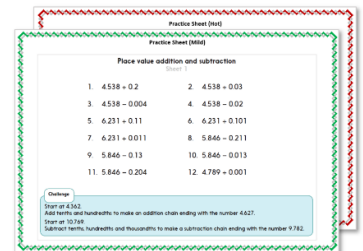
1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



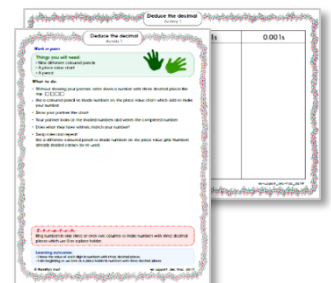
OR start by carefully reading through the **Learning Reminders**.



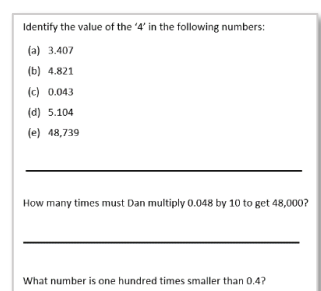
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



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



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



Learning Reminders

Use partitioning to multiply 3-digit numbers by 1-digit numbers.

Let's revise the grid method for 3×134 ...

Remember when multiplying - it doesn't matter which way around the numbers are: 3×134 and 134×3 will have the same answer!

1. **Partition 134**; write the numbers on the grid...

$\times$	100	30	4	
3	300	90	12	402

2. What is 100×3 ?

3. 30×3 ?

4. 4×3 ?

5. Finally add $300 + 90 + 12$.

Learning Reminders

Use partitioning to multiply 3-digit numbers by 1-digit numbers.

Now try 5×345 . What happens this time?



1. Partition 345 and put the numbers on the grid.

$\times$	300	40	5	
5	1500	200	25	1725

2. What is 300×5 ?

3. 40×5 ?

4. 5×5 ?

5. Finally add
 $1500 + 200 + 25$.

300×5 gave us a **4-digit number**. Be careful with the final addition!

Practice Sheet Mild

Using the grid method

Use the grid method to solve these multiplications.

$$3 \times 47$$

$$147 \times 3$$

$$3 \times 291$$

$$522 \times 4$$

$$4 \times 285$$

$$4 \times 492$$

$$123 \times 5$$

$$5 \times 181$$

$$6 \times 115$$

$$313 \times 8$$

Practice Sheet Hot

Multiplying three-digit numbers

Use the grid method to solve these multiplications.

$$3 \times 224$$

$$5 \times 549$$

$$3 \times 347$$

$$6 \times 215$$

$$513 \times 4$$

$$363 \times 8$$

$$4 \times 488$$

$$8 \times 428$$

$$623 \times 5$$

$$9 \times 314$$

Challenge

Find the missing number in this calculation:

$$63 \square \times 6 = \square 822$$

Practice Sheet Answers

Using the grid method (Mild)

$3 \times 47 = 141$

$147 \times 3 = 441$

$3 \times 291 = 873$

$522 \times 4 = 2088$

$4 \times 285 = 1140$

$4 \times 492 = 1968$

$123 \times 5 = 615$

$5 \times 181 = 905$

$6 \times 115 = 690$

$313 \times 8 = 2504$

Multiplying three-digit numbers (Hot)

$3 \times 224 = 672$

$3 \times 347 = 1041$

$513 \times 4 = 2052$

$4 \times 488 = 1952$

$623 \times 5 = 3115$

$5 \times 549 = 2745$

$6 \times 215 = 1290$

$363 \times 8 = 2904$

$8 \times 428 = 3424$

$9 \times 314 = 2826$

Challenge

$637 \times 6 = 3822$

A Bit Stuck?

Grid genius

Work in pairs, but record your work on your own sheet.

Things you will need:

- A pencil



What to do:

- Use the grid method to work out the answer to the multiplications:

$$3 \times 12$$

x	10	2	
3			

$$5 \times 13$$

x	10	3	
5			

$$4 \times 15$$

x	10	5	
4			

- Next choose at least two multiplications and draw your own grid to keep track of your steps. Now you are a grid genius!

$$7 \times 13$$

$$6 \times 14$$

$$8 \times 12$$

$$5 \times 15$$

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

Use the grid method to work out 3×24 and 4×24 . Remember that to work out 3×20 , we can multiply the answer to 3×2 by 10.

Learning outcomes:

- I can use the grid method to multiply numbers from 11 to 15 by 1-digit numbers.
- I am beginning to multiply numbers 21 to 25 by 1-digit numbers.

Check your understanding:

Questions

Use grid method to complete each of these:

$$424 \times 6 =$$

$$3 \times 848 =$$

What do you notice? Why does this happen?

Write the missing numbers:

x	300		
4		160	24

What is the final product?

Answers are on the next page

Check your understanding:

Answers

Use grid method to complete each of these:

$$424 \times 6 = 2544$$

x	400	20	4
6	2400	120	24

$$3 \times 848 = 2544$$

x	800	40	8
3	2400	120	24

What do you notice? Why does this happen?

The answers are the same since 848 is double 424 and it is being multiplied by 3 which is half of 6.

Write the missing numbers:

x	300	40	6
4	1200	160	24

What is the final product? 1384 (346 x 4).