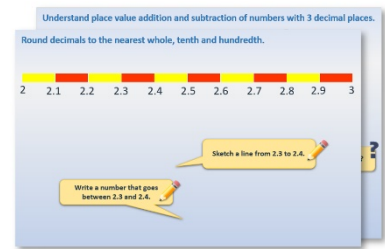


Week 14, Day 3

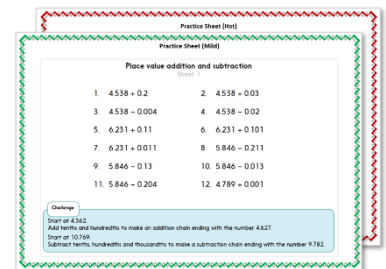
Revise short division, expressing remainders as fractions.

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

1. Start by carefully reading through the **Learning Reminders**.



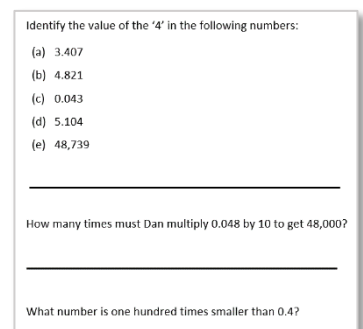
2. Tackle the questions on the **Practice Sheet**.
There might be a choice of either **Mild** (easier) or **Hot** (harder)!
Check the answers.



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

Revise short division of 4-digit numbers, expressing remainders as fractions.

Start with the 1000s. There are no 4s in 2 so leave a space above the 1000s place and move on.

Solving $2786 \div 4$ using short division

Now divide 27 by 4.
There are 6 4s in 27 and 3 left over.
Write 6 above the line, in the 100s place.
Write 3 in front of the next digit.

$$\begin{array}{r} 696r2 \\ 4 \overline{)2786} \end{array}$$

Now divide 38 by 4.
There are 9 4s in 38 and 2 left over.
Write 9 above the line, in the 10s place.
Write 2 in front of the next digit.

Now divide 26 by 4.
There are six 4s in 26 and 2 left over.
Write 6 above the line, in the 1s place.
There are 2 left over, so write r 2.

Learning Reminders

Revise short division of 4-digit numbers, expressing remainders as fractions.

$$2786 \div 4 = 696 \text{ r } 2$$

If we want an exact answer we can divide 2 by 4 to give $\frac{2}{4}$.
We can simplify that to $\frac{1}{2}$.
So $2786 \div 4 = 696\frac{1}{2}$

$$473 \div 4 = 118 \text{ r } 1$$

Here are the answers to 3 more division questions.

$$3958 \div 3 = 1319 \text{ r } 1$$

$$7975 \div 4 = 1993 \text{ r } 3$$

Now try to write these answers using fractions.

Answers

$1993\frac{1}{3}$
 $1319\frac{1}{3}$
 $118\frac{1}{4}$

Practice Sheet Mild

Short division

Use short division to work out the answers to these divisions.
Write the remainders as fractions.

1. $467 \div 3$

2. $623 \div 4$

3. $277 \div 3$

4. $651 \div 8$

5. $459 \div 6$

6. $272 \div 5$

7. $5631 \div 5$

8. $8621 \div 4$

9. $4478 \div 3$

10. $6832 \div 6$

Practice Sheet Hot

Short division

Use short division to work out the answers to these divisions.
Write the remainders as fractions.

1. $5631 \div 5$

2. $8621 \div 4$

3. $4478 \div 3$

4. $6832 \div 6$

5. $8234 \div 7$

6. $3345 \div 4$

7. $2845 \div 3$

8. $5043 \div 3$

9. $4823 \div 5$

10. $6728 \div 8$

11. $4527 \div 6$

12. $2934 \div 7$

Challenge

Write two other divisions by 6 with answers less than 1000.

Write two other divisions by 6 with answers between 1000 and 1200.

Practice Sheet Answers

Practice Sheet (Mild)

1. $467 \div 3 = 155 \frac{2}{3}$
2. $623 \div 4 = 155 \frac{3}{4}$
3. $277 \div 3 = 92 \frac{1}{3}$
4. $651 \div 8 = 81 \frac{3}{8}$
5. $459 \div 6 = 76 \frac{3}{6}$
6. $272 \div 5 = 54 \frac{2}{5}$
7. $5631 \div 5 = 1126 \frac{1}{5}$
8. $8621 \div 4 = 2155 \frac{1}{4}$
9. $4478 \div 3 = 1492 \frac{2}{3}$
10. $6832 \div 6 = 1138 \frac{4}{6}$

Practice Sheet (Hot)

1. $5631 \div 5 = 1126 \frac{1}{5}$
2. $8621 \div 4 = 2155 \frac{1}{4}$
3. $4478 \div 3 = 1492 \frac{2}{3}$
4. $6832 \div 6 = 1138 \frac{4}{6}$
5. $8234 \div 7 = 1176 \frac{2}{7}$
6. $3345 \div 4 = 836 \frac{1}{4}$
7. $2845 \div 3 = 948 \frac{1}{3}$
8. $5043 \div 3 = 1681$
9. $4823 \div 5 = 964 \frac{3}{5}$
10. $6728 \div 8 = 841$
11. $4527 \div 6 = 754 \frac{3}{6}$
12. $2934 \div 7 = 419 \frac{1}{7}$

Challenge

Write two other divisions by 6 with answers less than 1000.

e.g. $5662 \div 6 = 943 \frac{2}{3}$ and $3638 \div 6 = 606 \frac{1}{3}$

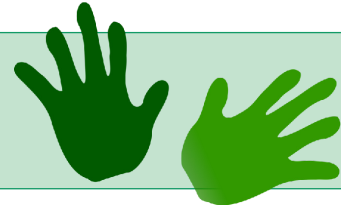
Write two other divisions by 6 with answers between 1000 and 1200.

e.g. $6404 \div 6 = 1067 \frac{1}{3}$ and $7199 \div 6 = 1199 \frac{5}{6}$

A Bit Stuck? Division dudes and divas

Things you will need:

- A pencil



1. $74 \div 3$

$$\begin{array}{r} 24 \text{ r } 2 \\ 3 \overline{)74} \end{array}$$

Now solve these divisions, just like the example:

2. $98 \div 6$

3. $93 \div 4$

4. $103 \div 8$

5. $117 \div 4$

6. $131 \div 6$

7. $178 \div 5$

8. $182 \div 8$

How to do this...

- o Look at the first digit
- o How many 3s in 7?
- o There are 2 so write 2 above the line
- o Write the remainder in front of the second digit
- o How many 3s in 14?
- o There are 4 so write 4 above the line
- o How many remaining?
- o Write r 2 after the answer.

Check your understanding: Questions

Find:

$$581 \div 7 = \square$$

$$3456 \div 5 = \square$$

$$5400 \div 9 = \square$$

A farmer is packing eggs.

Each box holds six eggs.

The farmer has 890 eggs to pack.

How many boxes will the farmer fill?

Fill the missing boxes to give an answer with fraction remainders as follows:

$$187 \div \square = \square \frac{1}{2}$$

$$331 \div \square = \square \frac{3}{4}$$

$$\square \div 10 = \square \frac{2}{5}$$

Answers on the next page

Check your understanding:

Answers

Find:

$$581 \div 7 = 83$$

$3456 \div 5 = 691 \text{ r } 1$ or $691\frac{1}{5}$ Note that 691 (without the remainder) is not correct.

$$5400 \div 9 = 600 \quad \text{Makes use of times tables knowledge (6 x 9 = 54).}$$

A farmer is packing eggs.

Each box holds six eggs.

The farmer has 890 eggs to pack.

How many boxes will the farmer fill?

The farmer fills 148 boxes.

The answer to the division, $890 \div 6$, is $148 \text{ r } 2$ (or $148\frac{2}{6}$) but note that that is not the answer to the word problem.

Fill the missing boxes to give an answer with fraction remainders as follows:

$$187 \div 2 = 93\frac{1}{2} \quad \text{A fraction of } \frac{1}{2} \text{ results from dividing an odd number by 2.}$$

$$331 \div 4 = 82\frac{3}{4} \quad \text{A fraction of } \frac{3}{4} \text{ (or } \frac{1}{4} \text{) results from dividing an odd number by 4.}$$

$$\text{e.g. } 14 \div 10 = 1\frac{2}{5} \quad 24 \div 10 = 2\frac{2}{5} \text{ etc. i.e. any number with a 4 as the 1s digit.}$$