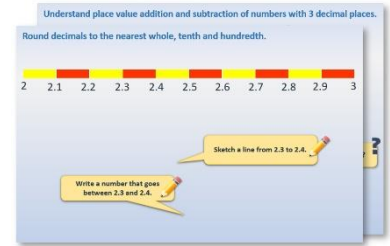


# Year 4: Week 1, Day 3

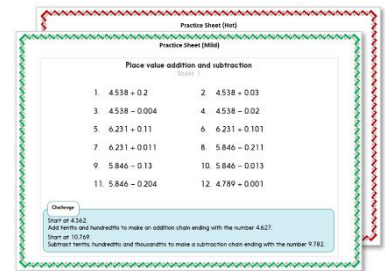
## Fractions of amounts

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

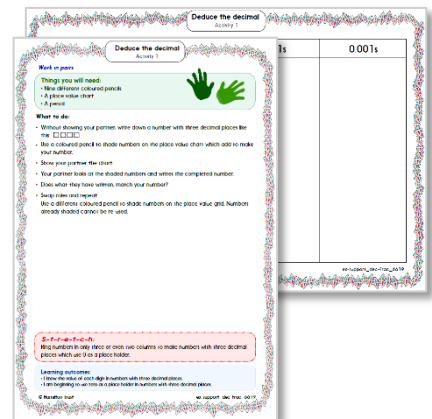
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



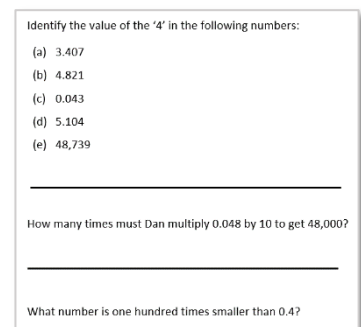
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



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

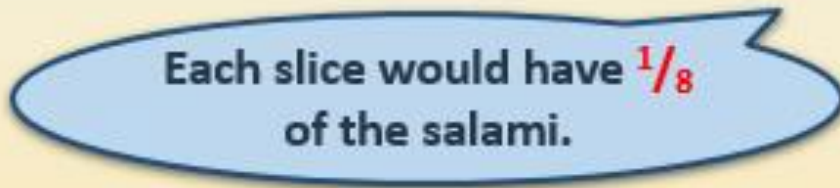


4. Have I mastered the topic? A few questions to **Check your understanding**. Fold the page to hide the answers!



## Learning Reminders

Find unit and non-unit fractions of amounts.



$$16 \div 8 = ?$$



## Learning Reminders

Find unit and non-unit fractions of amounts.

We can make a list of  
fraction facts for  
eighths of 16...



$$\frac{1}{8} \text{ of } 16 = 2$$

$$\frac{2}{8} \text{ of } 16 = 4$$

$$\frac{3}{8} \text{ of } 16 = 6$$

$$\frac{4}{8} \text{ of } 16 = 8$$

$$\frac{5}{8} \text{ of } 16 = 10$$

$$\frac{6}{8} \text{ of } 16 = 12$$

$$\frac{7}{8} \text{ of } 16 = 14$$

$$\frac{8}{8} \text{ of } 16 = 16$$

## Learning Reminders

Find unit and non-unit fractions of amounts.

|    |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|
| 16 |   |   |   |   |   |   |   |
| 2  | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

We can also show fractions of 16 using a **bar model**.  
Each small bar represents  $\frac{1}{8}$  of the whole.

How can we use the bar model to find  $\frac{3}{8}$  of 16 or  $\frac{5}{8}$  of 16?



$\frac{3}{8}$  of 16 will be  
3 of the 2s.  $3 \times 2 = 6$ .

$\frac{5}{8}$  of 16 will be  
5 of the 2s.  $5 \times 2 = 10$ .

## Practice Sheet Mild

### Linking fractions and division

If this chocolate bar was cut into four equal pieces, how many chunks would be in each piece?

$\frac{1}{4}$  of 24 is

$\frac{3}{4}$  of 24 is

If this chocolate bar was cut into three equal pieces, how many chunks would be in each piece?

$\frac{1}{3}$  of 24 is

$\frac{2}{3}$  of 24 is

If this chocolate bar was cut into six equal pieces, how many chunks would be in each piece?

$\frac{1}{6}$  of 24 is

$\frac{5}{6}$  of 24 is

If this chocolate bar was cut into eight equal pieces, how many chunks would be in each piece?

$\frac{1}{8}$  of 24 is

$\frac{3}{8}$  of 24 is



### Challenge

What other fraction of this chocolate bar would give you a whole number of pieces?  
List as many as you can. Write how many pieces each fraction would give you, e.g.  $\frac{5}{8}$  of 24 is 15.

## Practice Sheet Hot

### Linking fractions and division

$40 \div 5 = \boxed{\phantom{000}}, \text{ so}$

$\frac{1}{5}$  of 40 is

$\frac{4}{5}$  of 40 is

$40 \div 10 = \boxed{\phantom{000}}, \text{ so}$

$\frac{1}{10}$  of 40 is

$\frac{7}{10}$  of 40 is

$\frac{3}{10}$  of 40 is

$40 \div 8 = \boxed{\phantom{000}}, \text{ so}$

$\frac{1}{8}$  of 40 is

$\frac{5}{8}$  of 40 is

$\frac{8}{8}$  of 40 is

#### Challenge

True or false?  $\frac{9}{5}$  of 40 is 72?

## Practice Sheet Answers

### Linking fractions and division (mild)

$\frac{1}{4}$  of 24 is 6

$\frac{3}{4}$  of 24 is 18

$\frac{1}{3}$  of 24 is 8

$\frac{2}{3}$  of 24 is 16

$\frac{1}{6}$  of 24 is 4

$\frac{5}{6}$  of 24 is 20

$\frac{1}{8}$  of 24 is 3

$\frac{3}{8}$  of 24 is 9

### Challenge

$\frac{1}{2}$  of 24 is 12     $\frac{2}{6}$  of 24 is 8     $\frac{2}{8}$  of 24 is 6     $\frac{1}{12}$  of 24 = 2

$\frac{2}{4}$  of 24 is 12     $\frac{3}{6}$  of 24 is 12     $\frac{4}{8}$  of 24 is 12     $\frac{2}{12}$  of 24 = 4

$\frac{4}{6}$  of 24 is 16     $\frac{5}{8}$  of 24 is 15     $\frac{3}{12}$  of 24 = 6

$\frac{6}{8}$  of 24 is 18     $\frac{4}{12}$  of 24 = 8

$\frac{7}{8}$  of 24 is 21     $\frac{5}{12}$  of 24 = 10

$\frac{6}{12}$  of 24 = 12

$\frac{7}{12}$  of 24 = 14

$\frac{8}{12}$  of 24 = 16

$\frac{9}{12}$  of 24 = 18

$\frac{10}{12}$  of 24 = 20

$\frac{11}{12}$  of 24 = 22

### Linking fractions and division (hot)

$40 \div 5 = 8$ , so

$\frac{1}{5}$  of 40 is 8

$\frac{4}{5}$  of 40 is 32

$40 \div 10 = 4$ , so

$\frac{1}{10}$  of 40 is 4

$\frac{7}{10}$  of 40 is 28

$\frac{3}{10}$  of 40 is 12

$40 \div 8 = 5$ , so

$\frac{1}{8}$  of 40 is 5

$\frac{5}{8}$  of 40 is 25

$\frac{8}{8}$  of 40 is 40

### Challenge

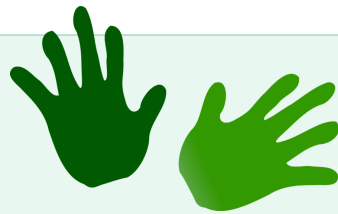
True.  $\frac{1}{5}$  of 40 is 8.  $\frac{9}{5}$  lots of  $\frac{1}{5}$ , so  $9 \times 8 = 72$ .

## A Bit Stuck? Choccie Quarters

*Work in pairs*

### Things you will need:

- A pencil
- Cake picture
- 40 chocolate buttons or counters



### What to do:

Share the chocolate buttons between the quarters on the cake to help you to answer these questions.

$\frac{1}{4}$  of 8 is

$\frac{1}{2}$  of 8 is

$\frac{3}{4}$  of 8 is

$\frac{1}{4}$  of 28 is

$\frac{1}{2}$  of 28 is

$\frac{3}{4}$  of 28 is

$\frac{1}{4}$  of 16 is

$\frac{1}{2}$  of 16 is

$\frac{3}{4}$  of 16 is

$\frac{1}{4}$  of 32 is

$\frac{1}{2}$  of 32 is

$\frac{3}{4}$  of 32 is

$\frac{1}{4}$  of 24 is

$\frac{1}{2}$  of 24 is

$\frac{3}{4}$  of 24 is

$\frac{1}{4}$  of 40 is

$\frac{1}{2}$  of 40 is

$\frac{3}{4}$  of 40 is

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

Think of other numbers of chocolate buttons that you could place on the cake, so that there is the same number of buttons in each quarter.

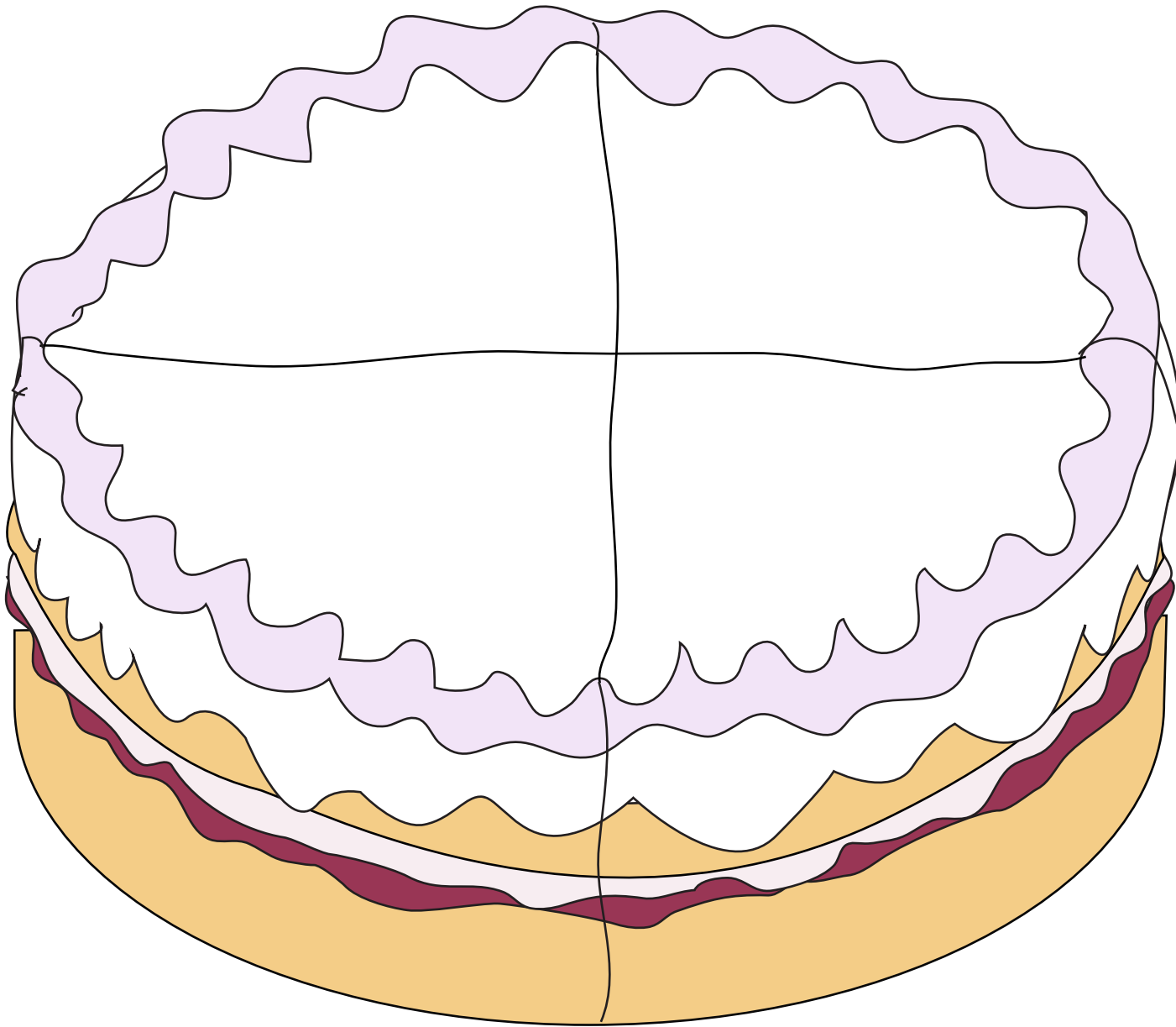
You are not allowed to cut up any buttons!

### Learning outcomes:

- I can find  $\frac{1}{4}$ ,  $\frac{1}{2}$  and  $\frac{3}{4}$  of amounts (whole number answers).
- I understand that  $\frac{3}{4}$  is the same as  $\frac{1}{2}$ .
- I am beginning to see that we can share numbers in the 4 times table into quarters (whole number answers).



**A Bit Stuck?**  
**Choccie Quarters**



## Check your understanding Questions

Write all the fraction facts for tenths of 60.

$$\frac{1}{10} \text{ of } 60 =$$

$$\frac{2}{10} \text{ of } 60 =$$

etc. to  $\frac{10}{10}$

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Use this bar diagram

|    |  |  |  |  |  |  |  |
|----|--|--|--|--|--|--|--|
| 48 |  |  |  |  |  |  |  |
|    |  |  |  |  |  |  |  |

to help find answers

(i)  $\frac{1}{8}$  of 48 =

(ii)  $\frac{3}{8}$  of 48 =

(iii)  $\frac{7}{8}$  of 48 =

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Is  $\frac{1}{10}$  of 50 the same as  $\frac{1}{5}$  of 100?

Fold here to hide answers

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## Check your understanding Answers

Write all the fraction facts for tenths of 60.

$$\frac{1}{10} \text{ of } 60 = 6$$

$$\frac{2}{10} \text{ of } 60 = 12$$

etc. (18, 24, 30, 36, 42, 48, 54) to  $\frac{10}{10} = 60$  Do children make the connection to 6x table facts?

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Use this bar diagram

|    |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|
| 48 |   |   |   |   |   |   |   |
| 6  | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

to help find answers

(i)  $\frac{1}{8}$  of 48 = 6

(ii)  $\frac{3}{8}$  of 48 = 18

(iii)  $\frac{7}{8}$  of 48 = 42