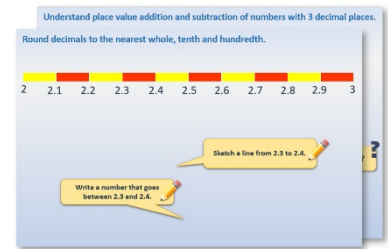


# Week 8, Day 4

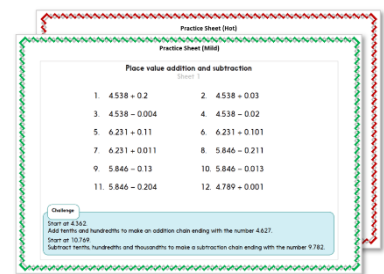
## Find non-unit fractions of quantities (1)

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

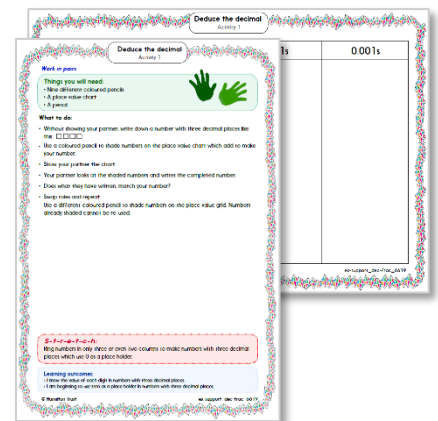
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



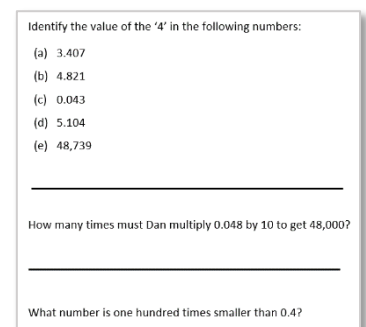
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



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

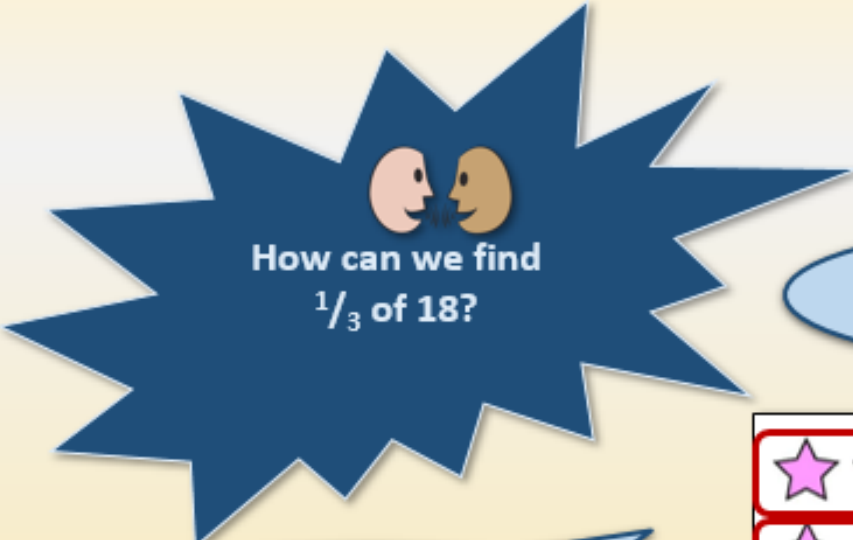


4. Have I mastered the topic? A few questions to **Check your understanding**. Fold the page to hide the answers!



## Learning Reminders

Find non-unit fractions of quantities using division facts and multiplication.



How can we find  $\frac{1}{3}$  of 18?

We can **divide** 18 by 3.

We can use a 3 by 6 array to check.

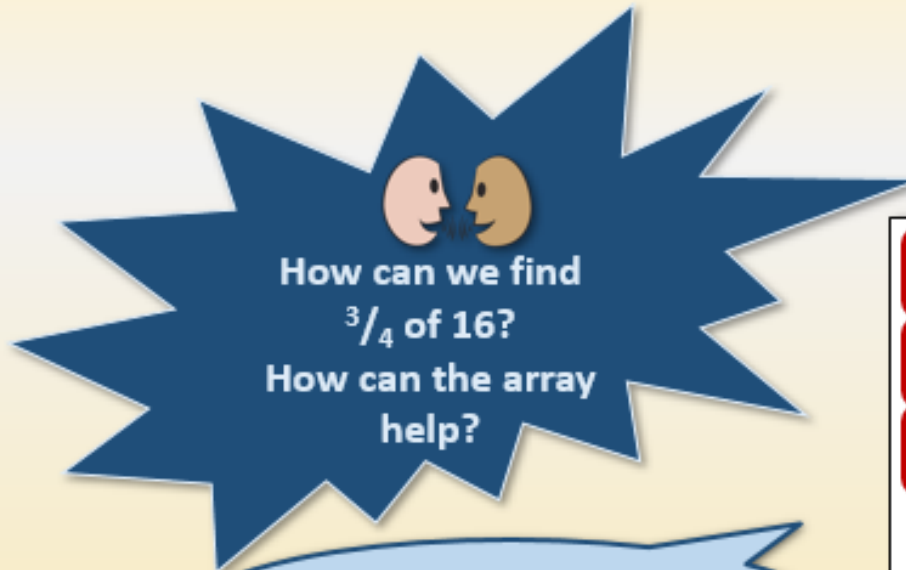


$\frac{1}{3}$  of 18 = 6

$\frac{2}{3}$  of 18 = 12

## Learning Reminders

Find non-unit fractions of quantities using division facts and multiplication.



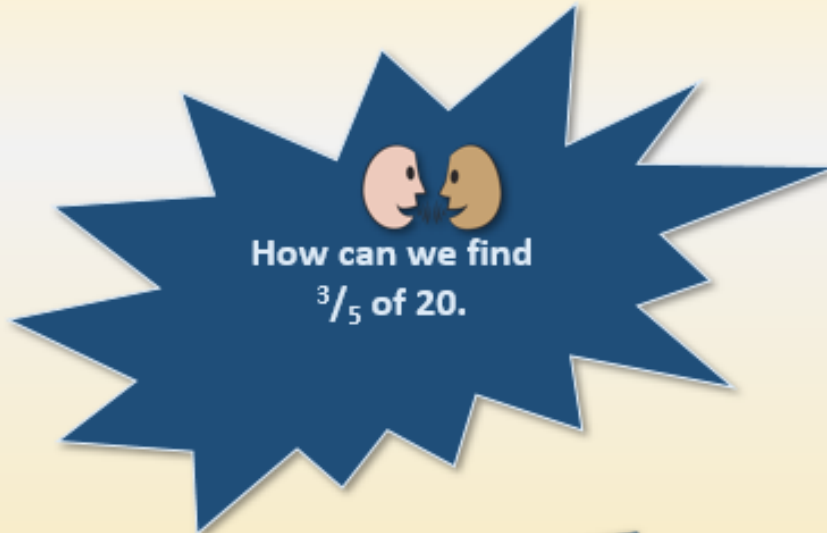
We can **divide 16 by 4**  
to find  $\frac{1}{4}$ ...

...then **multiply by 3** to  
find  $\frac{3}{4}$ ...

$$\frac{3}{4} \text{ of } 16 = 12$$

## Learning Reminders

Find non-unit fractions of quantities using division facts and multiplication.



We can **divide 20 by 5**  
to find  $\frac{1}{5}$ ...

...then **multiply by 3** to  
find  $\frac{3}{5}$ .

$$\frac{3}{5} \text{ of } 20 = 12$$

The answer will not  
always be 12 ...

## Practice Sheet Mild

### Find non-unit fractions of numbers

In each case use the answer to the first in each pair to find the answer to the second.

$$\frac{1}{4} \text{ of } 16 = \boxed{\phantom{000}} \longrightarrow \frac{3}{4} \text{ of } 16 = \boxed{\phantom{000}}$$

$$\frac{1}{3} \text{ of } 21 = \boxed{\phantom{000}} \qquad \frac{2}{3} \text{ of } 21 = \boxed{\phantom{000}}$$

$$\frac{1}{5} \text{ of } 50 = \boxed{\phantom{000}} \qquad \frac{3}{5} \text{ of } 50 = \boxed{\phantom{000}}$$

$$\frac{1}{8} \text{ of } 32 = \boxed{\phantom{000}} \qquad \frac{4}{8} \text{ of } 32 = \boxed{\phantom{000}}$$

$$\frac{1}{10} \text{ of } 90 = \boxed{\phantom{000}} \qquad \frac{4}{10} \text{ of } 90 = \boxed{\phantom{000}}$$

$$\frac{1}{4} \text{ of } 24 = \boxed{\phantom{000}} \qquad \frac{2}{4} \text{ of } 24 = \boxed{\phantom{000}}$$

$$\frac{1}{3} \text{ of } 33 = \boxed{\phantom{000}} \qquad \frac{2}{3} \text{ of } 33 = \boxed{\phantom{000}}$$

$$\frac{1}{5} \text{ of } 25 = \boxed{\phantom{000}} \qquad \frac{4}{5} \text{ of } 25 = \boxed{\phantom{000}}$$

$$\frac{1}{8} \text{ of } 16 = \boxed{\phantom{000}} \qquad \frac{7}{8} \text{ of } 16 = \boxed{\phantom{000}}$$

$$\frac{1}{10} \text{ of } 30 = \boxed{\phantom{000}} \qquad \frac{9}{10} \text{ of } 30 = \boxed{\phantom{000}}$$

## Practice Sheet Hot

Find non-unit fractions of numbers

$$\frac{3}{4} \text{ of } 16 = \boxed{\phantom{00}}$$

$$\frac{2}{4} \text{ of } 24 = \boxed{\phantom{00}}$$

$$\frac{2}{3} \text{ of } 21 = \boxed{\phantom{00}}$$

$$\frac{2}{3} \text{ of } 33 = \boxed{\phantom{00}}$$

$$\frac{3}{5} \text{ of } 50 = \boxed{\phantom{00}}$$

$$\frac{4}{5} \text{ of } 25 = \boxed{\phantom{00}}$$

$$\frac{4}{8} \text{ of } 32 = \boxed{\phantom{00}}$$

$$\frac{7}{8} \text{ of } 16 = \boxed{\phantom{00}}$$

$$\frac{4}{10} \text{ of } 90 = \boxed{\phantom{00}}$$

$$\frac{9}{10} \text{ of } 30 = \boxed{\phantom{00}}$$

### Challenge

Find the mystery fractions/numbers:

$$\boxed{\phantom{00}} \text{ of } 22 = 11$$

$$\frac{\boxed{\phantom{00}}}{5} \text{ of } 30 = 18$$

$$\frac{\boxed{\phantom{00}}}{8} \text{ of } 48 = 36$$

$$\frac{5}{\boxed{\phantom{00}}} \text{ of } 49 = 35$$

$$\frac{3}{4} \text{ of } \boxed{\phantom{00}} = 60$$

## Practice Sheets Answers

### Find non-unit fractions of numbers (mild)

$$\frac{1}{4} \text{ of } 16 = 4$$

$$\frac{1}{3} \text{ of } 21 = 7$$

$$\frac{1}{5} \text{ of } 50 = 10$$

$$\frac{1}{8} \text{ of } 32 = 4$$

$$\frac{1}{10} \text{ of } 90 = 9$$

$$\frac{1}{4} \text{ of } 24 = 6$$

$$\frac{1}{3} \text{ of } 33 = 11$$

$$\frac{1}{5} \text{ of } 25 = 5$$

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

$$\frac{1}{10} \text{ of } 30 = 3$$

$$\frac{3}{4} \text{ of } 16 = 12$$

$$\frac{2}{3} \text{ of } 21 = 14$$

$$\frac{3}{5} \text{ of } 50 = 30$$

$$\frac{4}{8} \text{ of } 32 = 16$$

$$\frac{4}{10} \text{ of } 90 = 36$$

$$\frac{2}{4} \text{ of } 24 = 12$$

$$\frac{2}{3} \text{ of } 33 = 22$$

$$\frac{4}{5} \text{ of } 25 = 20$$

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

$$\frac{9}{10} \text{ of } 30 = 27$$

### Find non-unit fractions of numbers (hot)

$$\frac{3}{4} \text{ of } 16 = 12$$

$$\frac{2}{3} \text{ of } 21 = 14$$

$$\frac{3}{5} \text{ of } 50 = 30$$

$$\frac{4}{8} \text{ of } 32 = 16$$

$$\frac{4}{10} \text{ of } 90 = 36$$

$$\frac{2}{4} \text{ of } 24 = 12$$

$$\frac{2}{3} \text{ of } 33 = 22$$

$$\frac{4}{5} \text{ of } 25 = 20$$

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

$$\frac{9}{10} \text{ of } 30 = 27$$

### Challenge

$$\frac{1}{2} \text{ of } 22 = 11$$

$$\frac{3}{5} \text{ of } 30 = 18$$

$$\frac{6}{8} \text{ of } 48 = 36$$

$$\frac{5}{7} \text{ of } 49 = 35$$

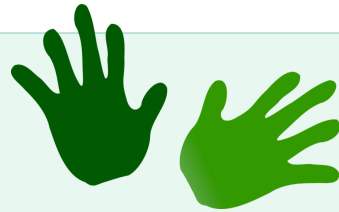
$$\frac{3}{4} \text{ of } 80 = 60$$

## 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.

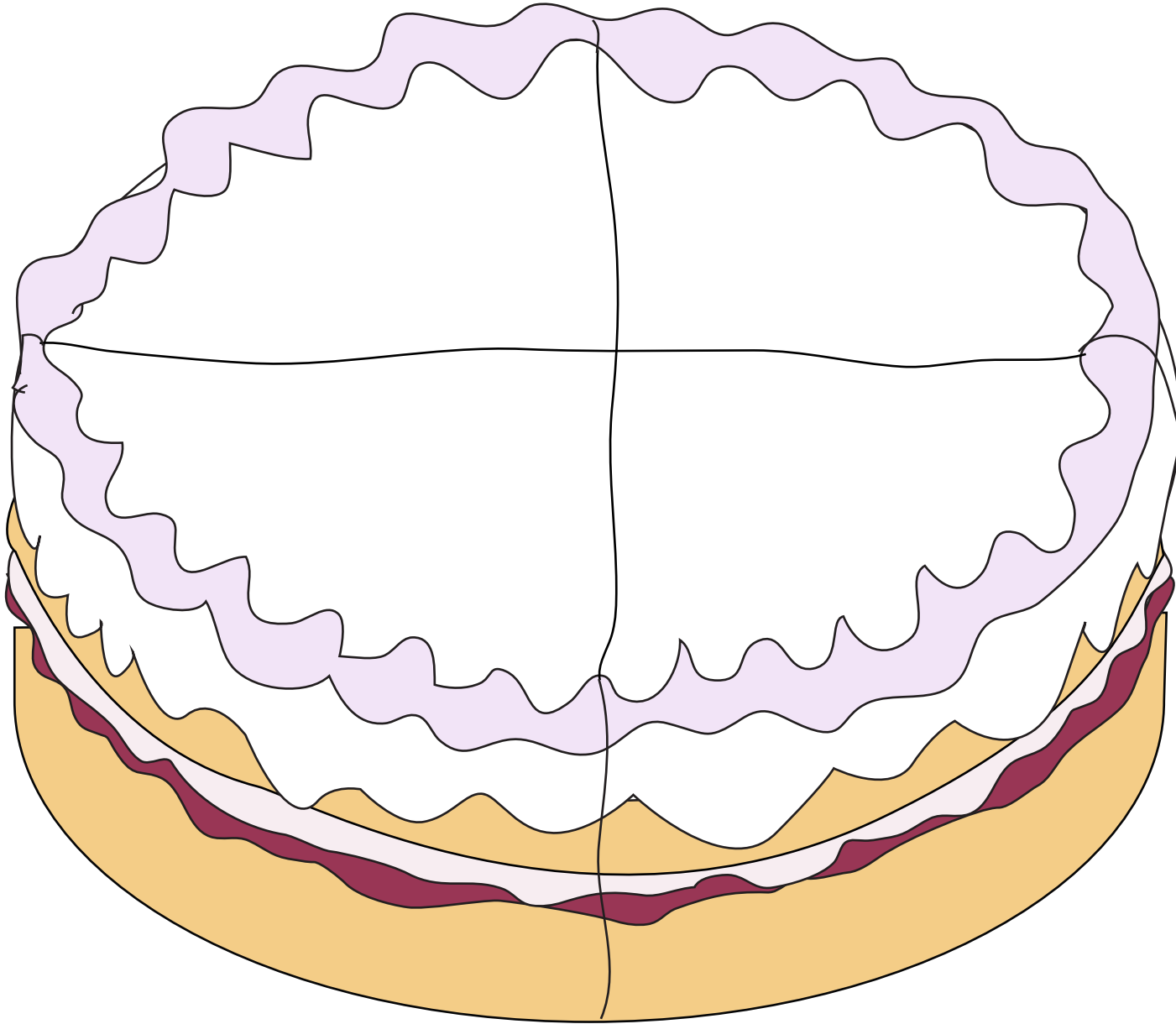
You are not allowed to cut up any buttons!

### 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

Find  $\frac{1}{8}$ , then  $\frac{3}{8}$  and then  $\frac{5}{8}$  of 24.

---

Write the missing numbers:

\_\_\_ of 15 is 5

$\frac{2}{3}$  of \_\_\_ = 14

$\frac{3}{5}$  of 20 = \_\_\_\_\_

\_\_\_ of 10 = 4

---

Which is bigger,  $\frac{2}{5}$  of 35 or  $\frac{3}{8}$  of 32?

---

### Challenge

Tom finds that 20 stickers fit in his book. This is  $\frac{1}{4}$  of his sticker collection. How many stickers does he have in all?

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## Check your understanding

### Answers

Find  $\frac{1}{8}$ , then  $\frac{3}{8}$  and then  $\frac{5}{8}$  of 24.

3, 9 and 15 respectively. Have children remembered the functions of the denominator and numerator correctly?

---

Write the missing numbers:

$\frac{1}{3}$  of 15 is 5

$\frac{2}{3}$  of 21 = 14

$\frac{3}{5}$  of 20 = 12

$\frac{2}{5}$  of 10 = 4

If children are struggling with these then model with counters.

---

Which is bigger:  $\frac{2}{5}$  of 35 or  $\frac{3}{8}$  of 32?

$\frac{2}{5}$  of 35 since it is 14.  $\frac{3}{8}$  of 32 is 12. Watch for children who have only found the unit fraction each time, they may still think the first fraction is bigger.

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### Challenge

Tom finds that 20 stickers fit in his book. This is  $\frac{1}{4}$  of his sticker collection. How many stickers does he have in all? 80.