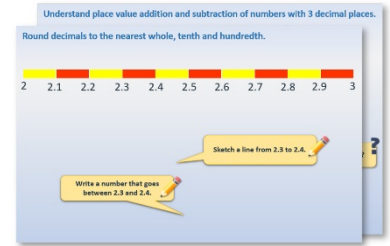


# Year 2: Week 2, Day 1

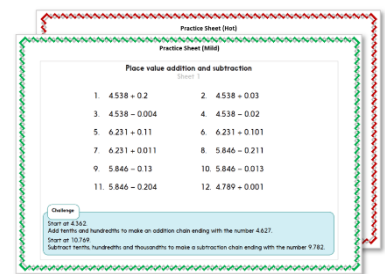
## Doubles and halves

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

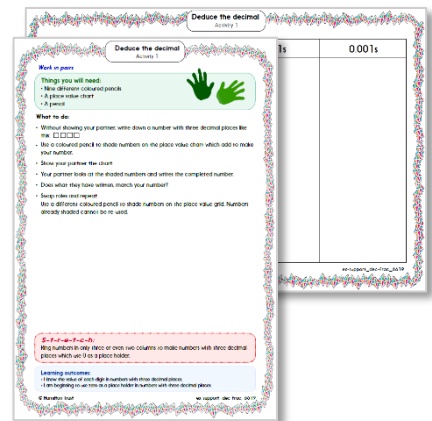
- Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



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



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



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

Identify the value of the '4' in the following numbers:

(a) 3.407  
 (b) 4.821  
 (c) 0.043  
 (d) 5.104  
 (e) 48,739

---

How many times must Dan multiply 0.048 by 10 to get 48,000?

---

What number is one hundred times smaller than 0.4?

## Learning Reminders

Double by partitioning.

We can use **place value cards** to help us **double** numbers!

To find double 23, first make 23 twice.

**Partition** each number.



**Re-order** the numbers.  
Can you see how?



**Double 20 then double 3.**



**Re-combine** the numbers.

**Double 23 is 46.**

We can record this as:

$$\begin{aligned} 23 + 23 &= 20 + 20 + 3 + 3 \\ &= 40 + 6 \\ &= 46 \end{aligned}$$

## Learning Reminders

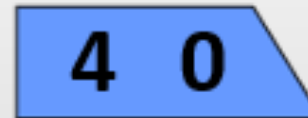
Double and halve by partitioning.

Let's try double 46

What shall we do first?



What shall we do next?



What shall we do next?



Add the 80 and 10, then the 2.

**Double 46 is 92.**

We can record that as:

$$\begin{aligned} 46 + 46 &= 40 + 40 + 6 + 6 \\ &= 80 + 12 \\ &= 90 + 2 \\ &= 92 \end{aligned}$$

## Learning Reminders

Double and halve by partitioning.

We can use the same strategy to **halve numbers**.

Make 46 with **place value cards**.

**Partition** the number.



**Halve 40 then halve 6.**



**Then re-combine.**









Half of 46 is 23.

We can check **by doubling 23**.  
Doubling and halving are opposites  
– in maths we say that they are the  
**inverse of one another**.

## Practice Sheet Mild

### Doubles and halves

Draw the number of cubes in the box to create the double. Write the double. Then write the half.

 Double 4 = <input type="text"/> Half of <input type="text" value="8"/> = <input type="text"/>	 Double 6 = <input type="text"/> Half of <input type="text"/> = <input type="text"/>	 Double 8 = <input type="text"/> Half of <input type="text"/> = <input type="text"/>	 Double 5 = <input type="text"/> Half of <input type="text"/> = <input type="text"/>
 Double 7 = <input type="text"/> Half of <input type="text"/> = <input type="text"/>	 Double 11 = <input type="text"/> Half of <input type="text"/> = <input type="text"/>	 Double 13 = <input type="text"/> Half of <input type="text"/> = <input type="text"/>	 Double 15 = <input type="text"/> Half of <input type="text"/> = <input type="text"/>

#### Challenge

Double  is 18      Half of  is 12      Double  is 20

A ladybird has 7 spots on one of its wings. How many spots are there in total on both wings?

## Practice Sheet Hot

### Doubling and halving to find pairs of numbers

Pick a number, either halve or double it using partitioning and then draw a line to link it to its inverse (opposite).

**36**  
Halve me

**42**  
Double me

**37**  
Double me

**74**  
Halve me

**68**  
Halve me

**94**  
Halve me

**47**  
Double me

**28**  
Halve me

**18**  
Double me

**14**  
Double me

**34**  
Double me

**84**  
Halve me

#### Challenge

Pick a ones number and double it. Keep doubling the answer until you reach 100.  
How many times did you have to double it?

## Practice Sheets Answers

### Doubles and halves (mild)

a) Half of 12 = 6 Double 6 = 12

b) Half of 16 = 8 Double 8 = 16

c) Half of 8 = 4 Double 4 = 8

d) Half of 18 = 9 Double 9 = 18

e) Half of 14 = 7 Double 7 = 14

f) Half of 20 = 10 Double 10 = 20

g) Half of 24 = 12 Double 12 = 24

h) Half of 30 = 15 Double 15 = 30

i) Half of 22 = 11 Double 11 = 22

j) Half of 28 = 14 Double 14 = 28

k) Half of 26 = 13 Double 13 = 26

l) Half of 0 = 0 Double 0 = 0

#### Challenge

Half of 30 = 15 Double 14 = 28

Half of 32 = 16 Double 19 = 38

### Doubling and halving to find pairs of numbers (hot)

36 halve me 18 double me 36

42 double me 84 halve me 42

68 halve me 34 double me 68

37 double me 74 halve me 37

94 halve me 47 double me 94

28 halve me 14 double me 28

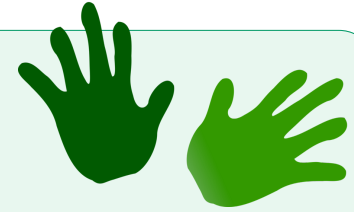
# A Bit Stuck?

## Be fair

Work in pairs, but draw on your own sheet

### Things you will need:

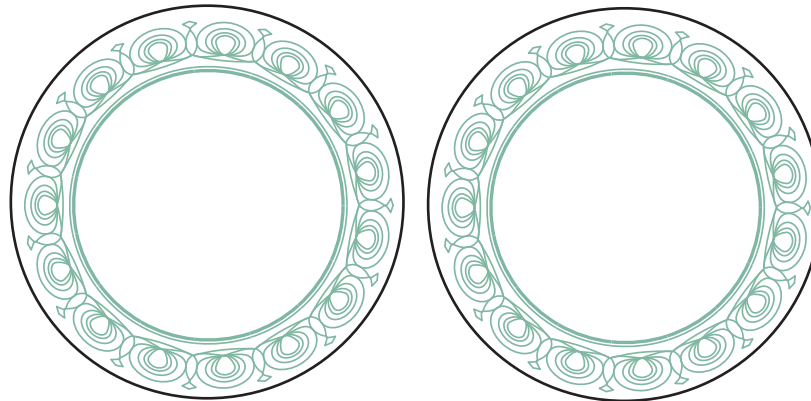
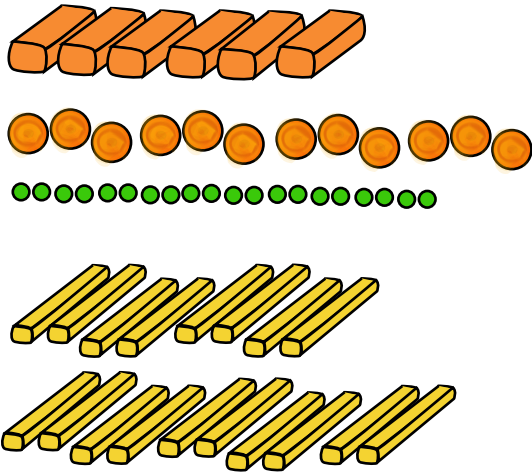
- Coloured pencils
- A pencil



### What to do:

- The twins insist that they have the same number of everything!

Draw food on their plates, making sure that you are sharing everything fairly.



Half of 6 is

Half of 12 is

Half of 20 is

Half of 18 is

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

Double 5 is 10 so half of 10 is .

Double 4 is 8 so half of 8 is .

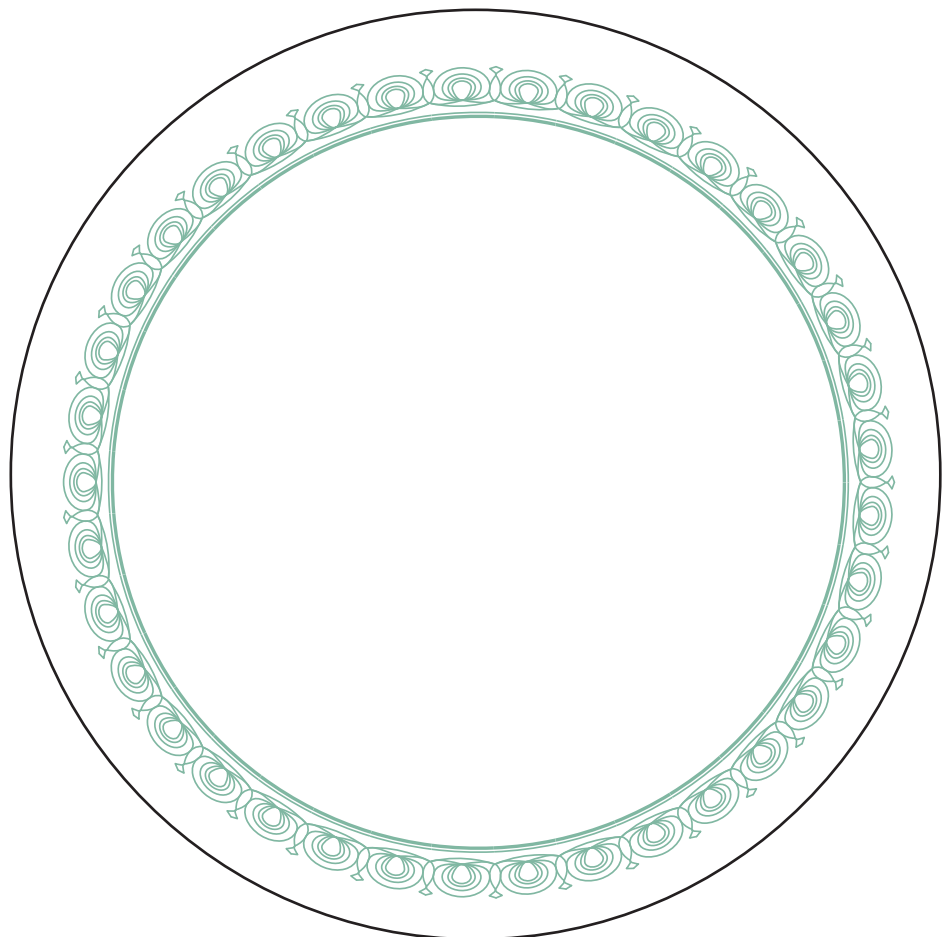
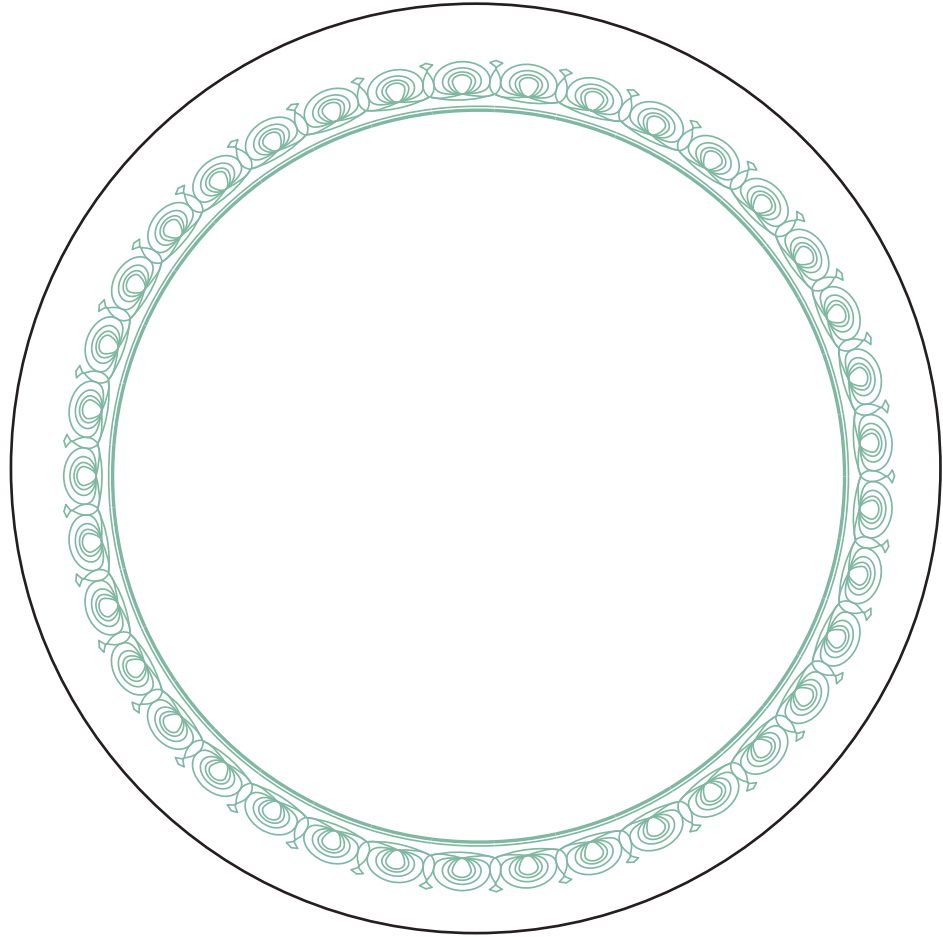
Double 6 is 12 so half of 12 is .

### Learning outcomes:

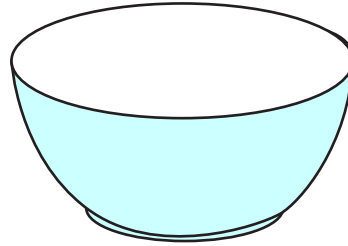
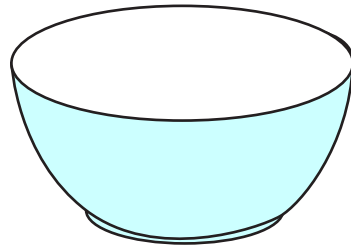
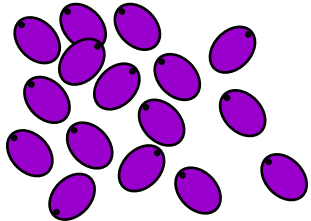
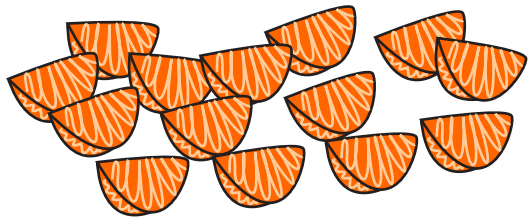
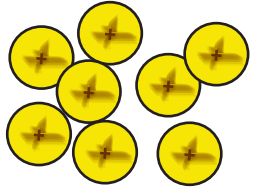
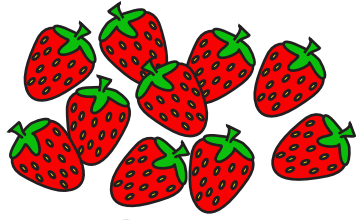
- I can find half of even numbers up to 20.
- I am beginning to relate doubling and halving.



**A Bit Stuck?**  
**Be fair**



**A Bit Stuck?**  
**Be fair**



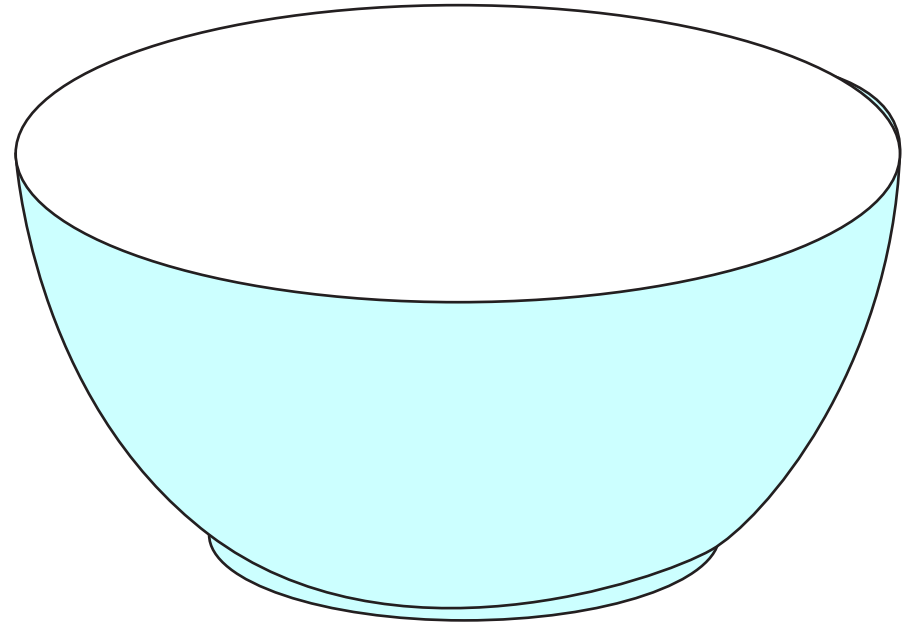
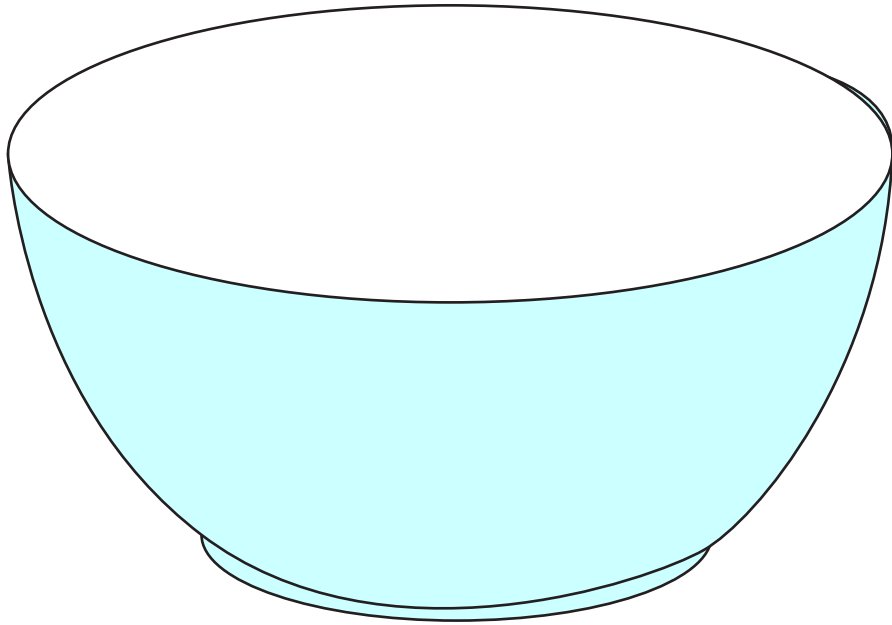
Half of 10 is

Half of 8 is

Half of 14 is

Half of 16 is

**A Bit Stuck?**  
**Be fair**



## Check your understanding

### Questions

Double 13 =  $\triangle$

Double  $\triangle$  is  $\diamond$

Double  $\diamond$  is  $\square$  Find  $\triangle$ ,  $\diamond$  and  $\square$

---

*Fold here to hide answers*

---

## Check your understanding

### Answers

Double 13 = 26

Double 26 is 52

Double 52 is 104 Find  $\triangle$ ,  $\diamond$  and  $\square$  26, 52, 104.

Do children partition each number twice to find the double? An answer of 42 for double 26 suggests children were not sure what to do when the sum of the 1s is greater than 10.

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