Week 10, Day 5
# Find a difference (2)

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.
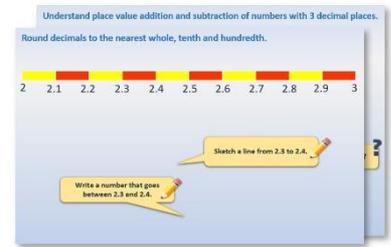
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.
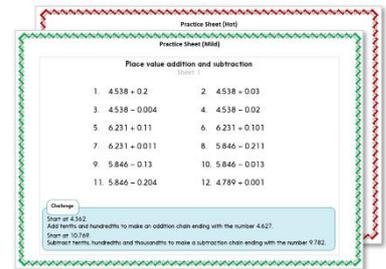
3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**
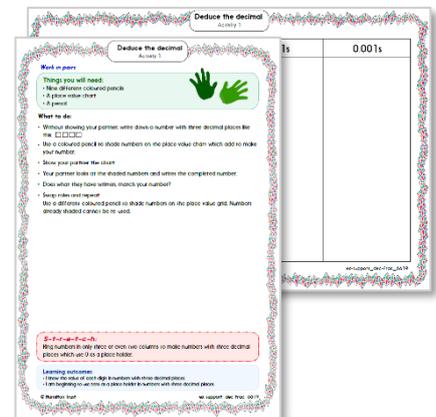
4. Think you've cracked it? Whizzed through the Practice Sheets? Have a go at the **Investigation**…

Learning Reminders
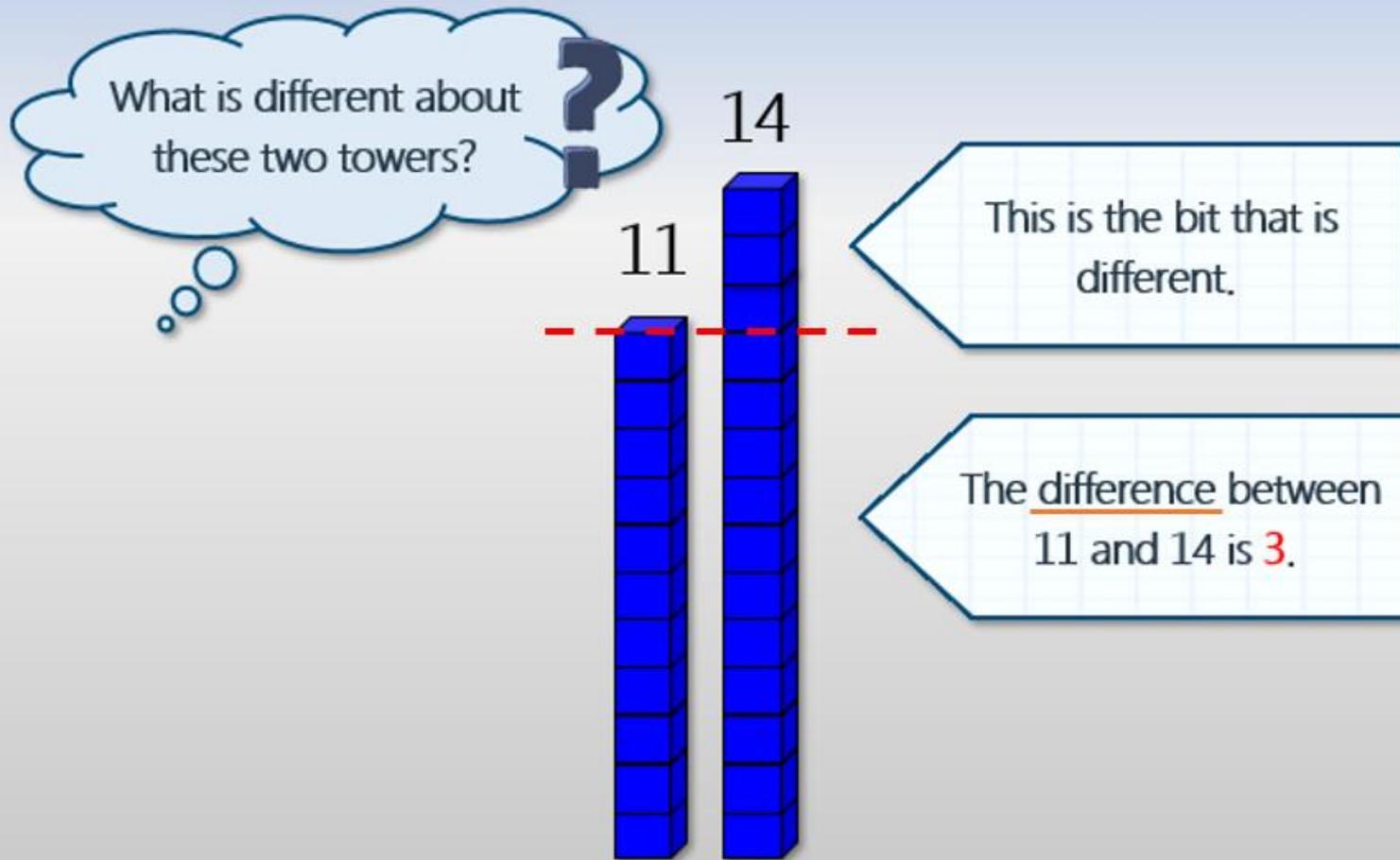
Find a difference in heights using cubes.

What is different about these two towers?

14

11

This is the bit that is different.

The difference between 11 and 14 is 3.

Learning Reminders

Find a difference in heights using cubes.

What is different about these two towers? **?**

15

12
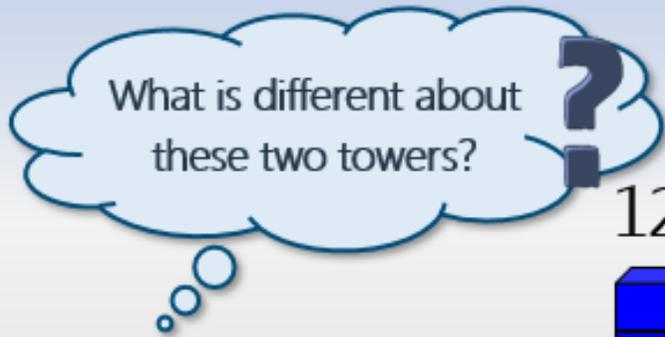
This is the bit that is different.

The difference between 12 and 15 is **3**.

Practice Sheet Mild
Find the differences!

Work out the difference between each of the sets of towers:

A.
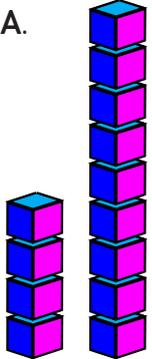
The difference is ⬜

B.
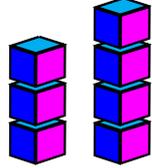
The difference is ⬜

C.
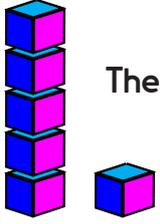
The difference is ⬜

D.
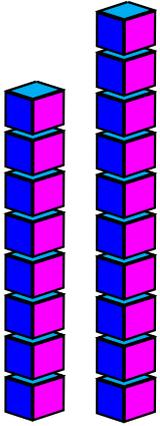
The difference is ⬜

E.
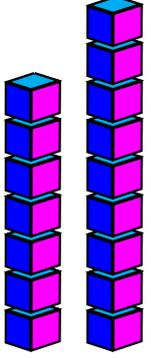
The difference is ⬜

Challenge

Can you draw two towers that have a difference of 3?

Practice Sheet Hot
Find the differences!

Work out the difference between each of the sets of towers:

A.
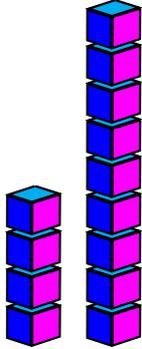
The difference is [ ]

B.

[ ]
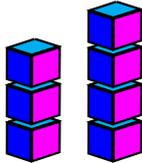
C.

[ ]
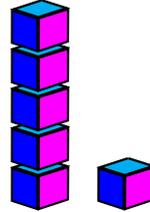
D.

[ ]
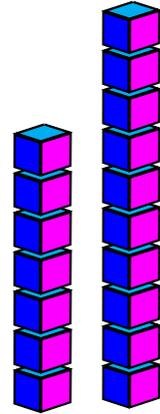
E.

[ ]
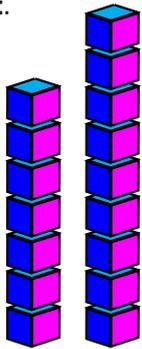
F.

[ ]
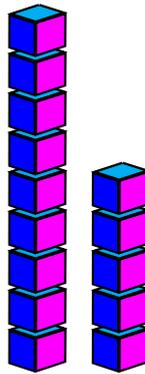
G.

[ ]
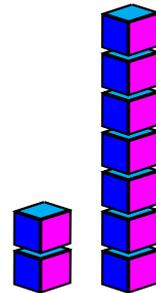
1.   Which pair of towers has the biggest difference?
2.   Which pair of towers has the smallest difference?
3.   Which towers have a difference of 2?
4.   Which of these towers have a difference of 4?

Challenge

Draw two more pairs of towers that have a difference of 4 - one pair that uses 8 cubes and one pair that uses 10 cubes.

Practice Sheet Answers

Find the differences! (mild)

A.   The difference is 5.

B.   The difference is 1.

C.   The difference is 4.

D.   The difference is 2.

E.   The difference is 2.

Challenge

Children should draw pairs of towers that have a difference of 3, e.g. 4 and 7 cubes, 2 and 5 cubes, 7 and 10 cubes, etc.

Find the differences! (hot)

A.   The difference is 5.

B.   The difference is 1.

C.   The difference is 4.

D.   The difference is 3.

E.   The difference is 2.

F.   The difference is 4.

G.   The difference is 5.

1.   Tower pairs A and G have the biggest difference, both being 5.

2.   Tower pair B has the smallest difference, of 1.

3.   Tower pair E has a difference of 2.

4.   Tower pair F has a difference of 4.

Challenge

Using exactly 8 cubes children should draw towers of 6 and 2 cubes as these have a difference of exactly 4 cubes.

Using exactly 10 cubes children draw towers of 7 cubes and 3 cubes, as these have a difference of exactly 4 cubes.

A Bit Stuck?
Penny differences

Things you will need:
• 20 pennies (or counters)
• 5 to 10 cards (see resource)
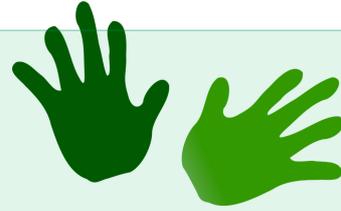
What to do:

- Choose two cards.

- Make a line of pennies to match each card.

For example:
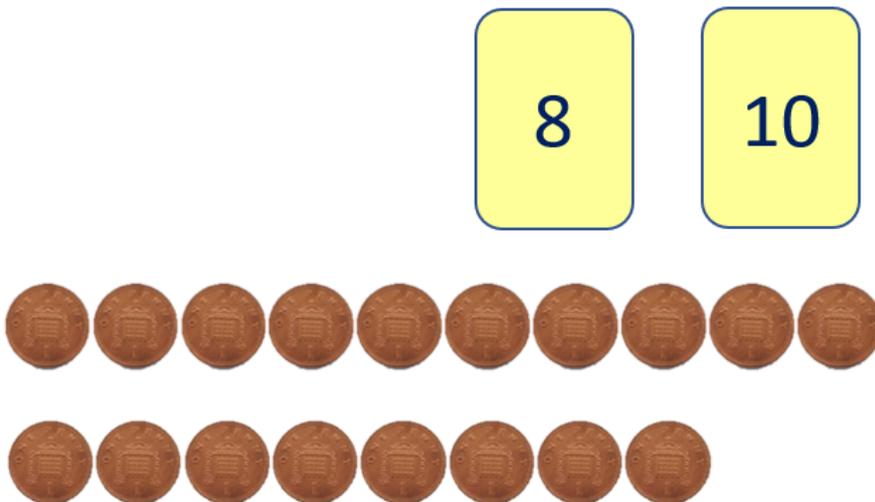
- What is the difference between your two lines of pennies?

  The difference between 8 and 10 is 2

- Repeat with other pairs of cards.

- How many differences can you find between pairs of numbers?
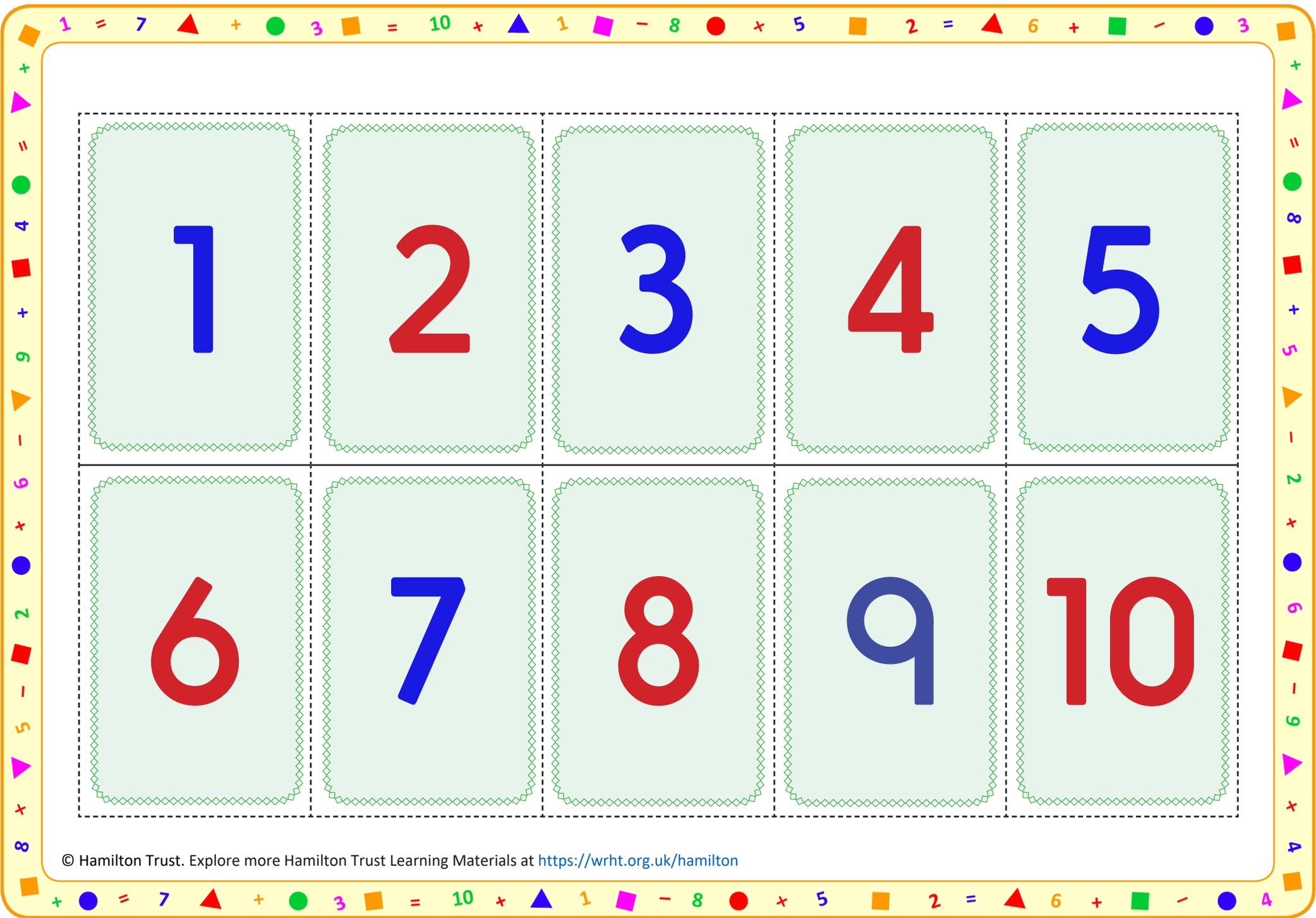
1	2	3	4	5
6	7	8	9	10

Investigation
Difference of 3

Your challenge:
Find as many different pairs of towers as possible that have a **difference of 3** bricks.
You may use up to 21 bricks but no more.

e.g. This pair of towers has a difference of 3 bricks.
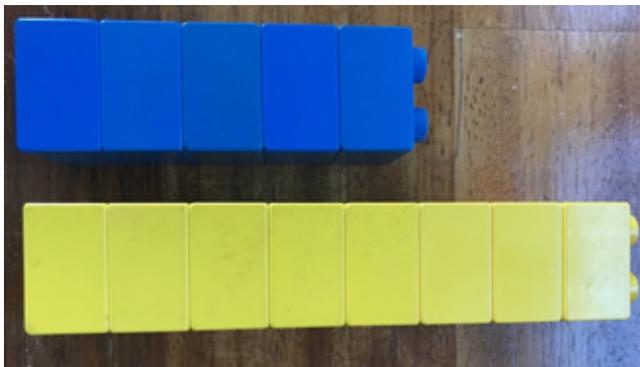
Numbers with a difference of 3

5 and 8
7 and ...

This pair of towers does NOT have a difference of 3 bricks.
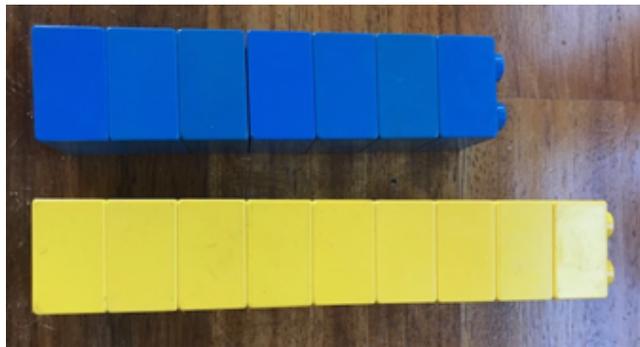
Can you find all 9 ways of making towers with a difference of 3 bricks?

Hint
If you want to find ALL the ways, it is good to have a system.
Here is a start. Can you carry it on?
1, 4
2, 5
3, 6
...

Can you spot the pattern?
What is happening to the numbers in each column?