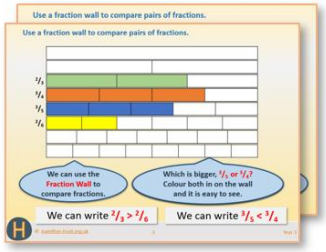
Week 7, Day 2

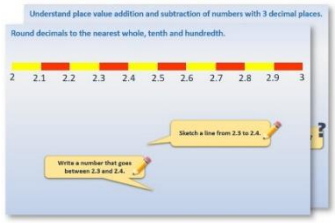
Use Frog (counting up) to subtract pairs of decimal numbers.

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

1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



OR start by carefully reading through the **Learning Reminders**.



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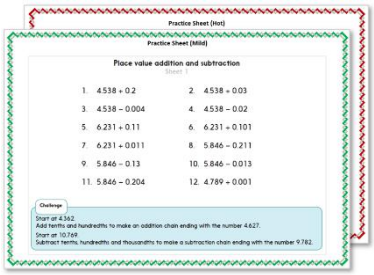
2. Tackle the questions on the **Practice Sheet**.
There might be a choice of either Mild (easier) or Hot (harder)!
Check the answers.



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

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4. Think you've cracked it? Whizzed through the Practice Sheets?
Have a go at the **Investigation**…

Learning Reminders

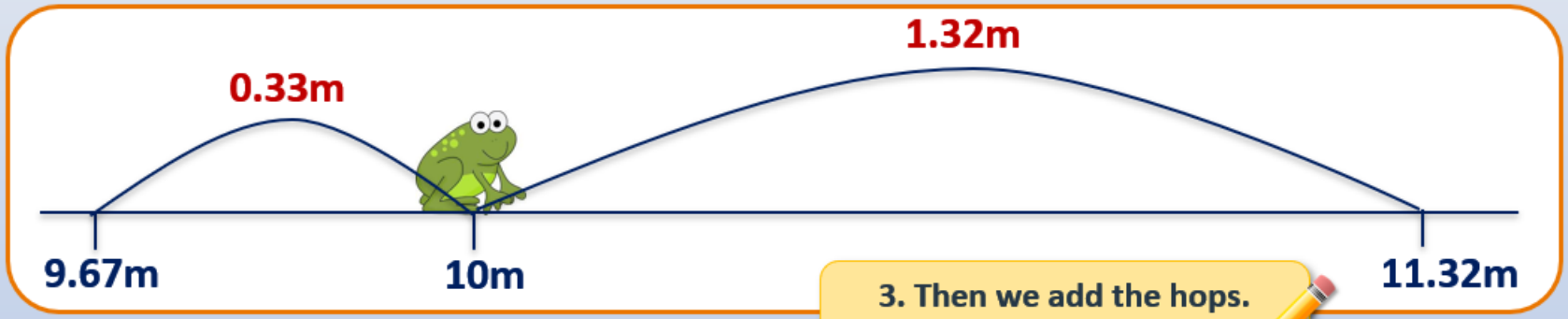
Use Frog (counting up) to subtract pairs of numbers.

Harry's best javelin throw at sports day last summer was 9.67 metres, but today he has thrown a huge 11.32 metres! How much further has he thrown?

We can use FROG to count up to find the difference in the throws.

1. Frog jumps 0.33m from 9.67m to the next whole number of metres.

2. Frog next jumps 1.32m from 10m to 11.32m.



3. Then we add the hops.
1.32m + 0.33m = 1.65m.

Learning Reminders

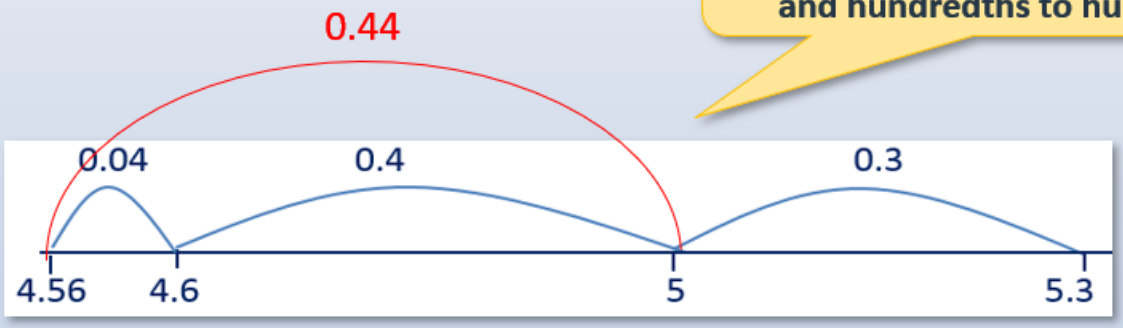
Use Frog (counting up) to subtract pairs of numbers.

Distance	Measurement
Classroom width	4.56m
Classroom length	5.3m
Hall length	10.4m
Hall width	7.56m
Table width	0.5m
Table length	1.25m

How much *longer* is the classroom than it is *wide*?

We draw an empty number line jotting to show how we could find this difference.

We need to be careful about place value when adding tenths to tenths and hundredths to hundredths.



0.04 to 4.6, then 0.4 to 5, or one big jump of 0.44.

Then 0.3 to 5.3.

0.4m + 0.3m + 0.04m = 0.74m, or 74cm

Practice Sheet Mild

Subtracting decimals

Use Frog to solve these subtractions.

1. 3.5 - 2.9
2. 5.2 - 3.7
3. 9.1 - 5.8
4. 7.2 - 6.85
5. 8.3 - 4.75
6. 9.23 - 7.8

Challenge

Make up at least 5 subtractions with an answer of 1.4

Practice Sheet Hot

Subtracting decimals

Use Frog to solve these subtractions.

1. 7.3 - 6.79
2. 8.45 - 7.8
3. 5.24 - 3.7
4. 9.4 - 5.78
5. 8.7 - 6.45
6. 7.5 - 5.29
7. 10.67 - 5.3
8. 12.8 - 9.27

Challenge

Make up at least 5 subtractions with an answer of 3.15

Practice Sheets Answers

Subtracting decimals (mild)

1. 3.5 - 2.9 = 0.6
2. 5.2 – 3.7 =1.5
3. 9.1 – 5.8 = 3.3
4. 7.2 – 6.85 = 0.35
5. 8.3 – 4.75 = 3.55
6. 9.23 – 7.8 =1.43

Challenge

Accept any calculations with the correct answer of 1.4, e.g. 6.8 - 5.4 = 1.4, 3.1 - 1.7 = 1.4 etc.

Subtracting decimals (hot)

1. 7.3 - 6.79 = 0.51
2. 8.45 - 7.8 = 0.65
3. 5.24 - 3.7 = 1.54
4. 9.4 - 5.78 = 3.62
5. 8.7 - 6.45 = 2.25
6. 7.5 - 5.29 = 2.21
7. 10.67 - 5.3 = 5.37
8. 12.8 - 9.27 = 3.53

Challenge

Accept any calculations with the correct answer of 3.15, e.g. 8.75 - 5.6 = 3.15

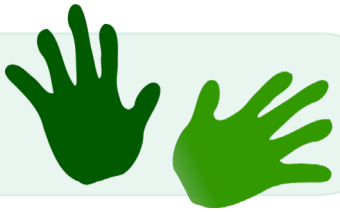
A Bit Stuck?
Frogs teeny hops

Work in pairs

What to do:

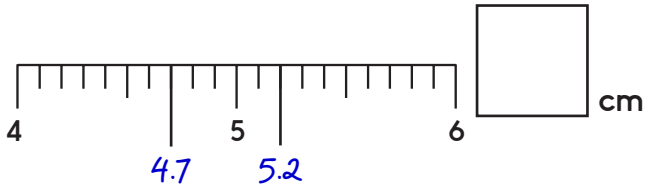
- Use Frog on the decimal number lines to find the difference between each pair of wingspans.

Things you will need:
- A pencil



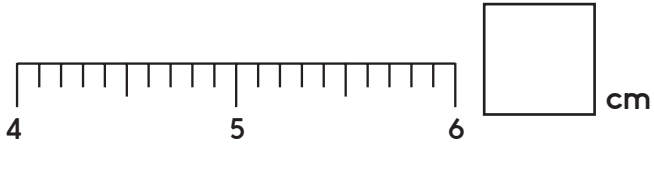

4.7cm


5.2cm



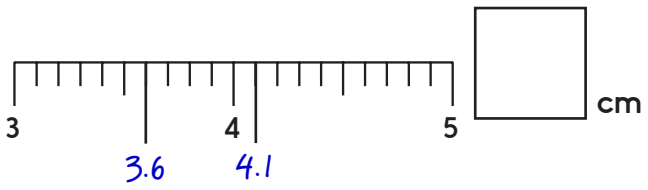

4.9cm


5.6cm



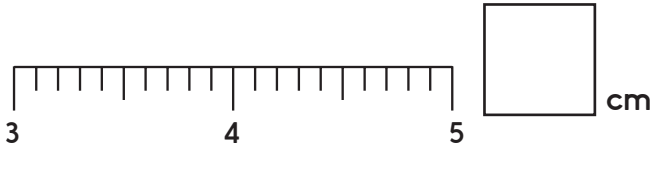

3.6cm


4.1cm



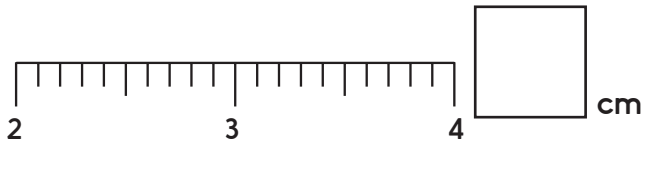

3.4cm


4.2cm



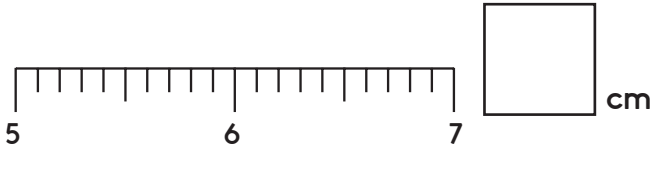

2.8cm


3.5cm




5.7cm


6.3cm

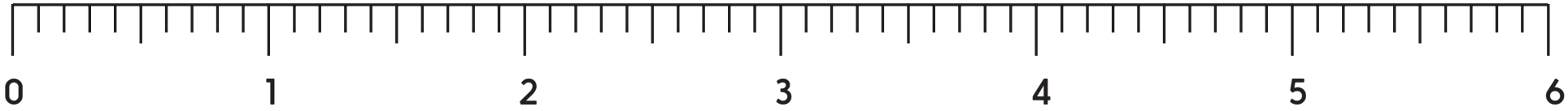


S-t-r-e-t-c-h:
Draw your own number line jotting to work out
6.2 – 5.5 and 8.4 – 7.8.
Remember to use your pairs to 10 to help.

Learning outcomes:
- I can use counting up (Frog) on a decimal number line to find the difference between decimal numbers on either side of a whole number, e.g. 2.3 – 1.8.
- I am beginning to sketch my own number line jottings to subtract decimal numbers on either side of a whole number.

A Bit Stuck?

Frogs teeny hops

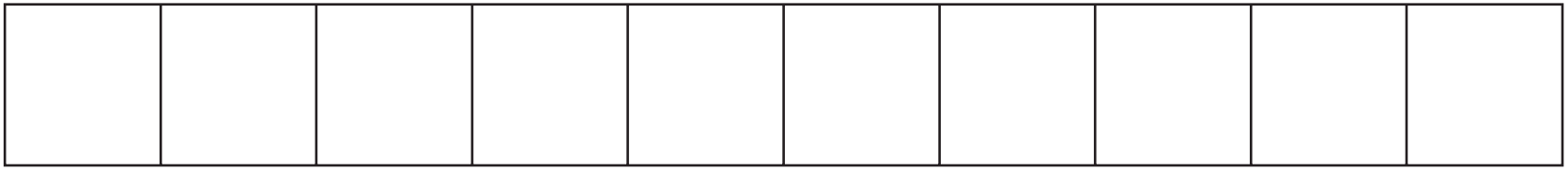


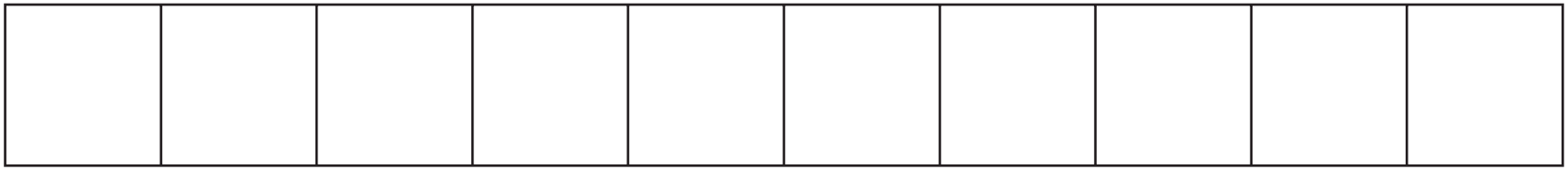
A Bit Stuck?

Frogs teeny hops

A Bit Stuck?

Frogs teeny hops

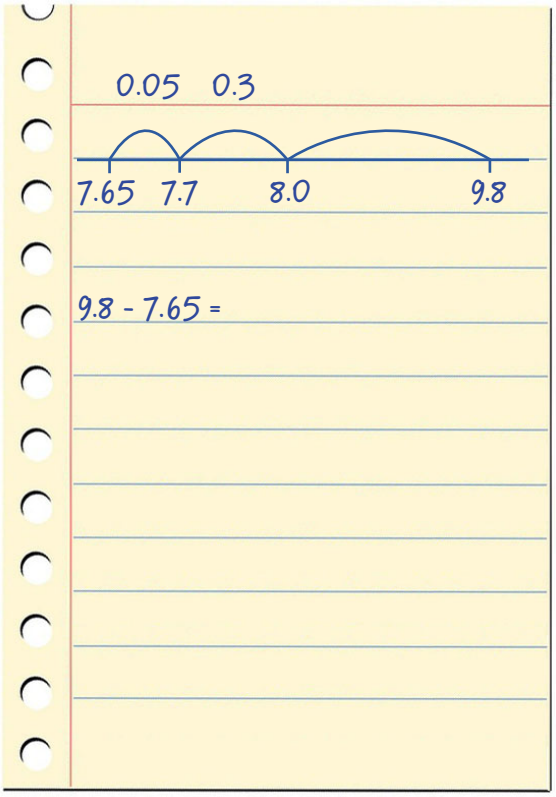




Investigation

Decimal differences

1. Use counting up to work out 9.8 – 7.65. Keep a note of both the subtraction and the answer.



2. Now work out 8.7 – 6.54. Keep a note of the subtraction and your answer.

3. Carry on this pattern of subtractions, 7.6 – 5.43, 6.5 – 4.32, 5.4 – 3.21, making a record of all your subtractions and their answers.

   Can you predict the answer to the next subtraction?
   Why do you think the sequence of subtractions gives such a pattern?

4. Now try 12.3 – 4.56
   23.4 – 5.67
   34.5 – 6.78 and so on.

What happens this time? This is a harder pattern to explain!
Look at how the whole number parts of the pair of numbers in each subtraction are increasing, and then how the decimal parts are increasing.

Investigate your own sequences of subtractions with consecutive digits, e.g. 9.87 – 6.5
8.76 – 5.4
7.65 – 4.5
For this sequence, you can use place value to subtract rather than counting up.
See what other patterns you can find. Why do you think they occur?