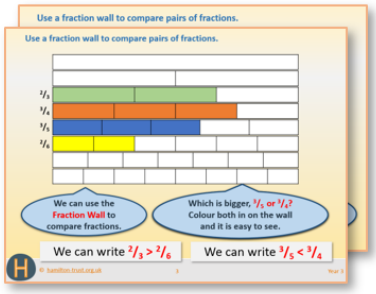
Week 10, Day 2

Revise using counting up (Frog) to subtract numbers with *different numbers* of decimal places. Solve subtraction word problems.

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.



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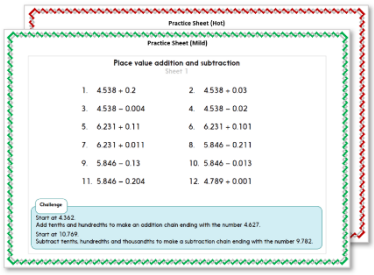
2. Tackle the questions on the **Practice Sheet**.
There might be a choice of either Mild (easier) or Hot (harder)!
Check the answers.



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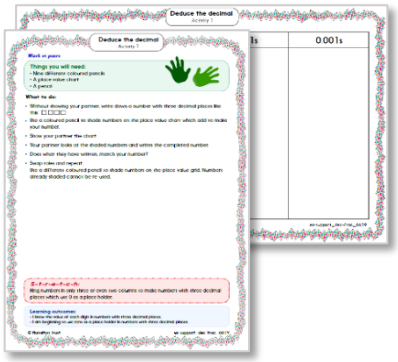
3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**



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

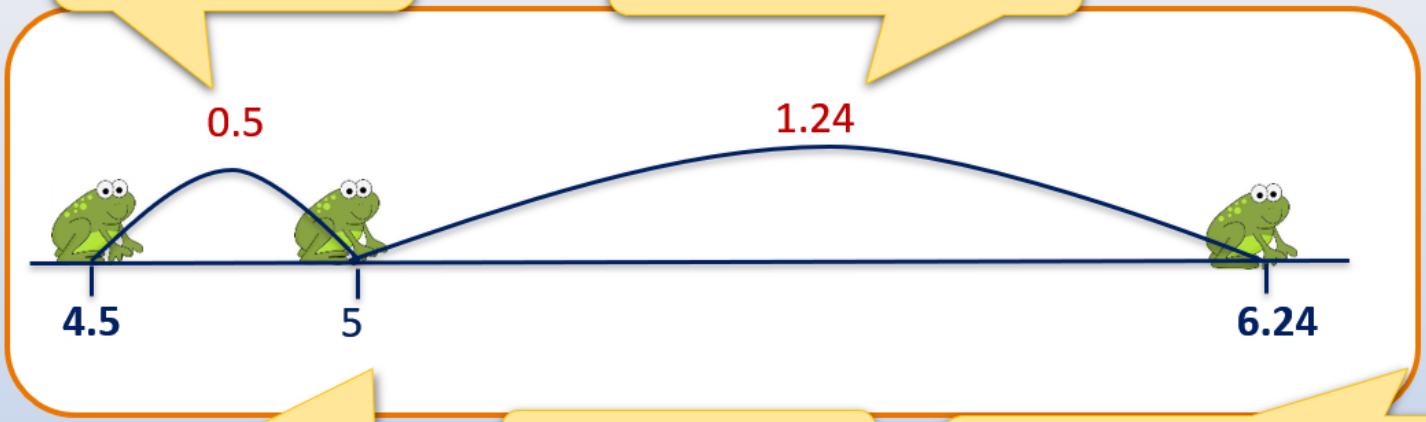
Learning Reminders

Revise using counting up (Frog) to subtract numbers with different numbers of decimal places (1 or 2); Solve subtraction word problems.

Look how we can use Frog to find the difference between 4.5 and 6.24.

Frog first hops 0.5 to 5, the next whole number...

... then another 1.24 to jump from 5 to 6.24.



Now add the jumps: 1.24 + 0.5 = 1.74.

So 6.24 - 4.5 = 1.74

Remember to add tenths to tenths: 1.24 + 0.5, so the answer is 1.74 and not 1.29!

Learning Reminders

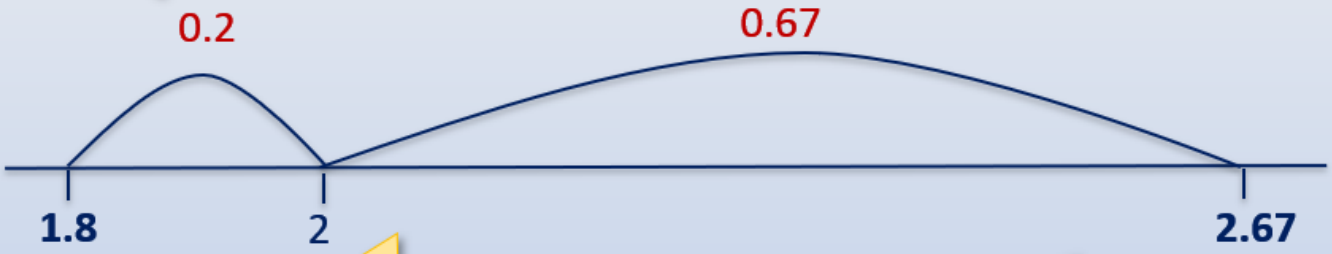
Revise using counting up (Frog) to subtract numbers with different numbers of decimal places (1 or 2); Solve subtraction word problems.

Angelie is trying to match the class standing jump record of 2.67m. Her longest jump so far is 1.8m. How much further does she need to jump?

We can sketch number line jottings to help solve word problems.

Always start with the smaller number. First jump is 0.2 to 2.

... then another 0.67 from 2 to 2.67.



Add the jumps: 0.67 + 0.2 = 0.87.

Angelie has to jump 0.87m further to match the class record!

Practice Sheet Mild

Subtracting decimals word problems

1. Ian uses 1.8m of a 2.4m strip of wood. How much is left?

2. Natalia is trying to match the class long jump record of 2.1m. Her longest jump so far is 1.96m. How much further does she need to jump?

3. Tom is 1.65 metres tall. He is a fan of a basketball player who is 2.1m tall!
How much shorter is Tom than the basketball player?

4. A lottery winner won £2.35 million! She gave some away and was left with £1.8 million.
How much did she give away?

5. Kai starts with 4.97, adds a number and ends up with 5.4.
How much did he add?

6. Sophie started at 4.34, subtracted a number and got 2.8.
How much did she subtract?

7. Find the difference between 9.4 and 4.08.
Now find another pair of numbers with the same difference.

8. Find the difference between 4.23 and 2.7.
Now find another pair of numbers with the same difference.

Practice Sheet Hot

Subtracting decimals word problems

1. Ian uses 1.89m of a 2.4m strip of wood. How much is left?

2. Natalia is trying to match the class long jump record of 2.34m.
Her longest jump so far is 1.9m. How much further does she need to jump?

3. Tom is 1.6 metres tall. He is a fan of a basketball player who is 2.14m tall!
How much shorter is Tom than the basketball player?

4. A lottery winner won £2.3 million! She gave some away and was left with £1.87 million.
How much did she give away?

5. Kai starts with 4.56, adds a number and ends up with 5.2. How much did he add?

6. Sophie started at 4.34, subtracted a number and got 3.7. How much did she subtract?

7. Find the difference between 4.5 and 2.78.
Now find another pair of numbers with the same difference.

8. Which of these subtractions has the biggest answer? And the smallest?
4.3 – 2.78, 4.2 – 2.87, 4.3 – 2.87 and 4.2 – 2.78.
Write them in order of size of answer from smallest to greatest.

Practice Sheets Answers

Subtracting decimals word problems (mild)

1. Ian has 0.6m left.
2. Natalia needs to jump 0.14m (14cm) further.
3. Tom is 0.45m shorter than the basketball player.
4. The lottery winner gave away £0.55 million or £550,000.
5. Kai added 0.43.
6. Sophie subtracted 1.54.
7. The difference between 9.4 and 4.08 is 5.32.
8. The difference between 4.23 and 2.7 is 1.53.

Subtracting decimals word problems (hot)

1. Ian has 0.51m left.
2. Natalia needs to jump 0.44m further.
3. Tom is 0.54m shorter than the basketball player.
4. The lottery winner gave away £0.43 million or £430,000.
5. Kai added 0.64.
6. Sophie subtracted 0.64.
7. The difference between 4.5 and 2.78 is 1.72.
8. 4.3 - 2.78 = 1.52 (biggest answer) 4.2 - 2.87 = 1.33 (smallest answer)
   From smallest to biggest:
   4.2 - 2.87 = 1.33, 4.2 - 2.78 = 1.42, 4.3 - 2.87 = 1.43, 4.3 - 2.78 = 1.52

A Bit Stuck?

Finding a difference

Use Frog to help find the difference in price between each pair of items.
Remember to **start** with the smaller amount.

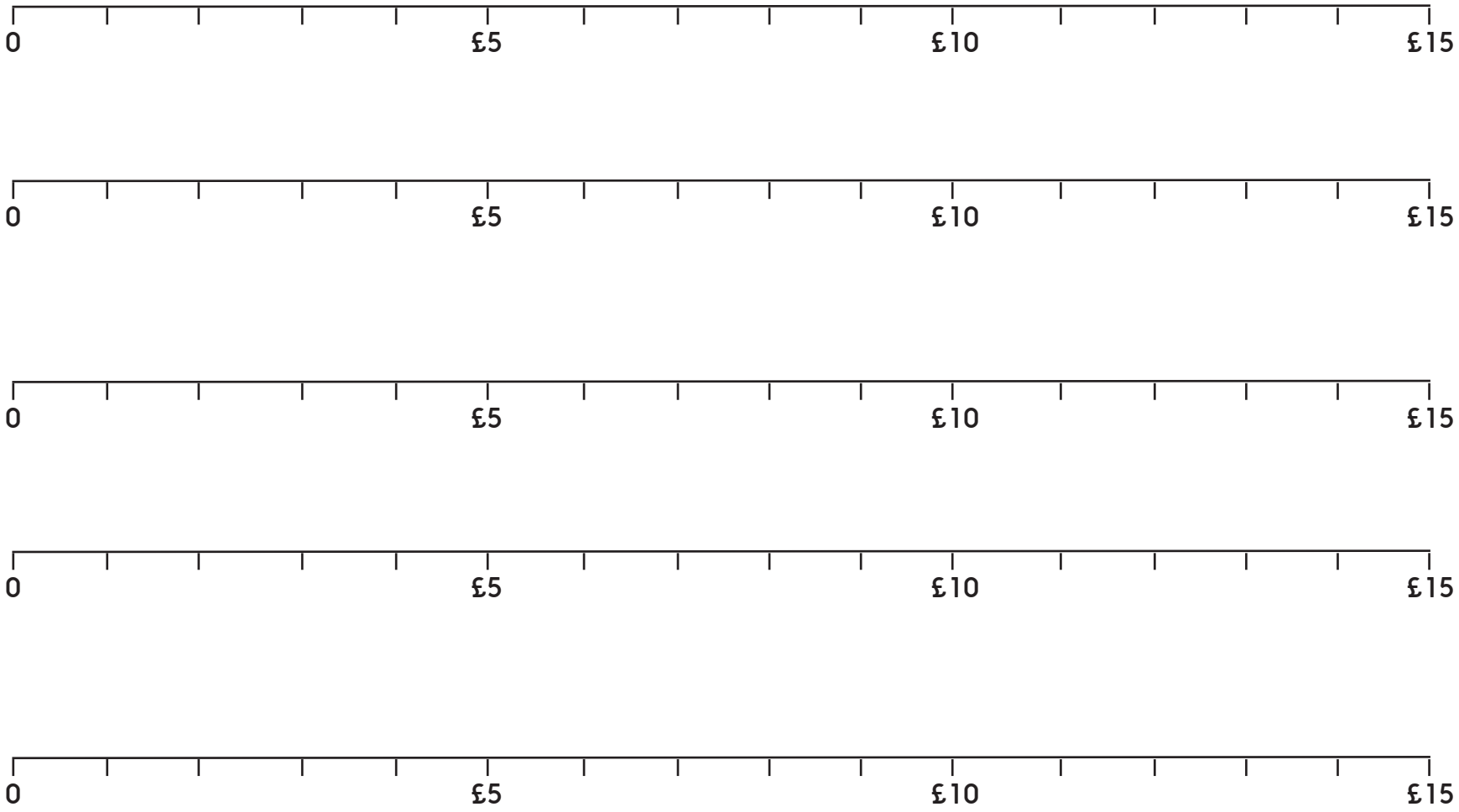
Item	www.techy.co.uk	www.itgadgets.co.uk	Difference in price
2 GB memory stick	£9.49	£8.99	
Travel mouse	£12.99	£13.25	
100 blank CDs	£10.15	£9.79	
Phone sock	£6.10	£5.89	
Torch	£7.99	£8.49	
Mouse mat	£4.19	£3.90	

Which item has the greatest difference in price? And the least difference?

If you could only visit one shop, which would you choose? Why?

A Bit Stuck?

Finding a difference



A Bit Stuck? Answers

Finding a difference

Item	www.techy.co.uk	www.it-gadgets.co.uk	Difference in price
2 GB memory stick	£9.49	£8.99	£0.50
Travel mouse	£12.99	£13.25	£0.26
100 blank CDs	£10.15	£9.79	£0.36
Phone sock	£6.10	£5.89	£0.21
Torch	£7.99	£8.49	£0.50
Mouse mat	£4.19	£3.90	£0.29

Greatest difference:
2GB memory stick and Torch
Least difference:
Phone sock

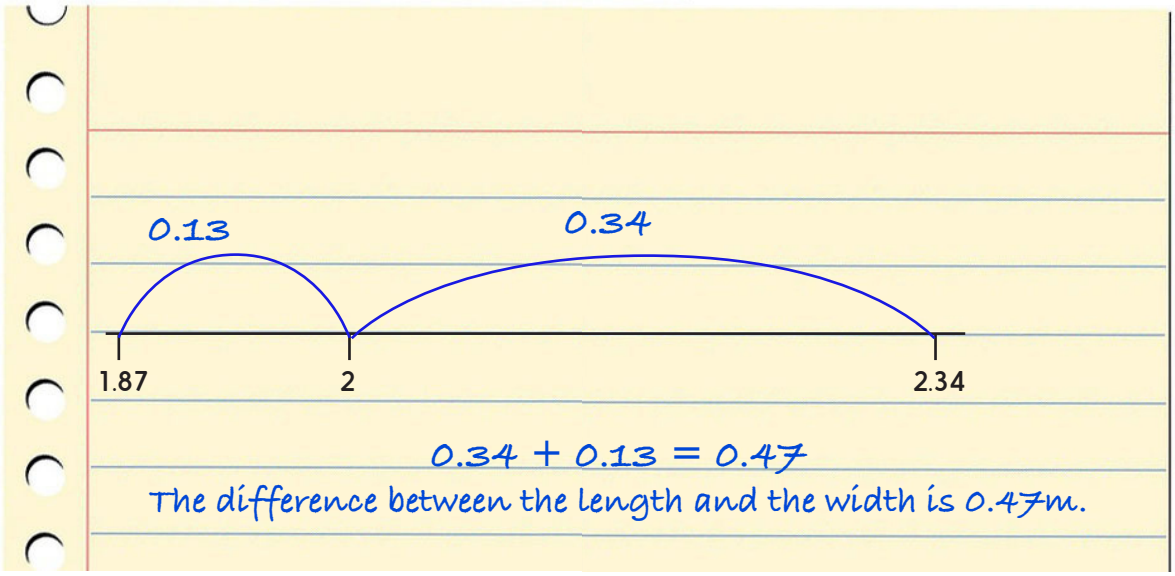
I would choose itgadgets. The total saving for techy is 76p, while the saving at itgadgets is £1.36.

Investigation
Measurement differences

Sketch three rectangles, with lengths and widths of the sides labelled:

a) 2.34m and 1.87m b) 5.37m and 3.48m c) 4.62m and 2.75m.

•Use Frog to find the difference between the length and the width of each. e.g.



Repeat with these. Which rectangle do you think will have the largest difference between length and width?

d) 2.4m and 1.68m e) 3.31m and 2.7m f) 3.34m and 1.7m

Create your own rectangle:

- Choose a length and a width between 2m and 8m.
  Each measurement must have 2 decimal places.
- Your aim is to create rectangles with a difference of 1.43m between length and width.
- Repeat this twice.

Create three different rectangles where the length and width have a difference of 3.17m. This time, the length should have 2 decimal places and the width 1 decimal place.

Challenge

- Find some rectangles, e.g. a table top, a book, etc.
- Measure the length and width, then find the difference.
- Which 'real life' rectangle has the largest difference between its length and its width?

Answers:
a) 0.47m b) 1.89m c) 1.87m d) 0.72m e) 0.61m f) 1.64m