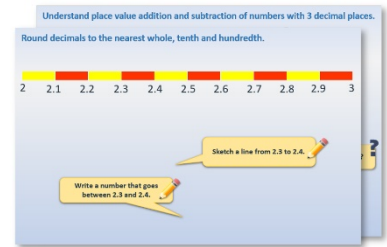


Week 14, Day 2

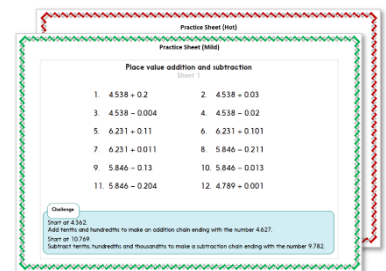
Divide 2-digit numbers by 1-digit numbers

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

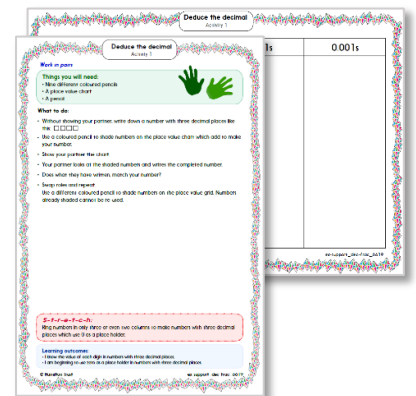
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



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



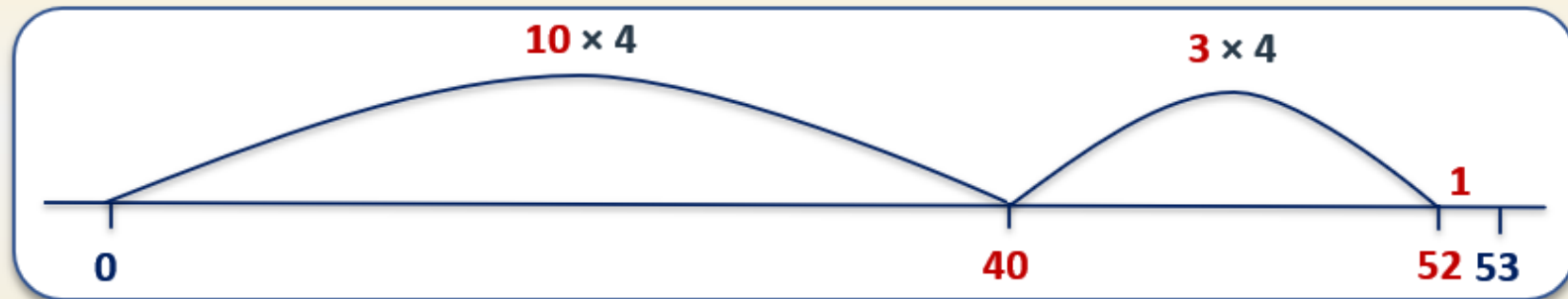
3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**



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

Learning Reminders

Divide 2-digit numbers by 1-digit numbers, with answers less than 30.



We can find
 $53 \div 4$ on an empty
number line.

10 4s are 40.

3 more 4s takes
us to 52.

The 1 left over is the
remainder.

$$53 \div 4 = 13 \text{ r } 1.$$

Remember 'r' stands for
'remainder'.

Learning Reminders

Divide 2-digit numbers by 1-digit numbers, with answers less than 30.

We can also use the 'bus shelter' for division.
Let's try $73 \div 3$.

We know that 20 3s are 60.
Put 20 in the answer line above 73.
Subtract 60 from 73 leaving 13.

We know that 4 3s are 12.
Add 4 to the answer line.
Subtract 12 from 13 to find the remainder.

$$\begin{array}{r} 20 + 4 \text{ r } 1 \\ 3 \overline{)73} \\ - 60 \\ \hline 13 \\ - 12 \\ \hline 1 \end{array}$$

First,
10 lots are not enough,
so, try 20 lots...

Second,
look to see how
many lots of 3
are left...

$$73 \div 3 = 24 \text{ r } 1.$$

Practice Sheet Mild

Division practice

Solve using 'chunking' on an empty number line or using 'bus shelter'.

1. $65 \div 5$

2. $42 \div 3$

3. $56 \div 4$

4. $78 \div 6$

5. $51 \div 3$

6. $72 \div 4$

7. $96 \div 6$

8. $104 \div 8$

Practice Sheet Hot

Division practice

Solve using 'chunking' on an empty number line or using 'bus shelter'.

1. $72 \div 3$

7. $136 \div 4$

2. $120 \div 5$

8. $175 \div 5$

3. $92 \div 4$

9. $204 \div 6$

4. $154 \div 7$

10. $288 \div 8$

5. $138 \div 6$

11. $288 \div 9$

6. $105 \div 3$

12. $266 \div 7$

Practice Sheets Answers

Division practice (mild)

1. $65 \div 5$

$$\begin{array}{r} 10 + 3 = 13 \\ 5 \overline{) 65} \\ - 50 \\ \hline 15 \\ - 15 \\ \hline 0 \end{array}$$

5. $51 \div 3$

$$\begin{array}{r} 10 + 7 = 17 \\ 3 \overline{) 51} \\ - 30 \\ \hline 21 \\ - 21 \\ \hline 0 \end{array}$$

2. $42 \div 3$

$$\begin{array}{r} 10 + 4 = 14 \\ 3 \overline{) 42} \\ - 30 \\ \hline 12 \\ - 12 \\ \hline 0 \end{array}$$

6. $72 \div 4$

$$\begin{array}{r} 10 + 8 = 18 \\ 4 \overline{) 72} \\ - 40 \\ \hline 32 \\ - 32 \\ \hline 0 \end{array}$$

3. $56 \div 4$

$$\begin{array}{r} 10 + 4 = 14 \\ 4 \overline{) 56} \\ - 40 \\ \hline 16 \\ - 16 \\ \hline 0 \end{array}$$

7. $96 \div 6$

$$\begin{array}{r} 10 + 6 = 16 \\ 6 \overline{) 96} \\ - 60 \\ \hline 36 \\ - 36 \\ \hline 0 \end{array}$$

4. $78 \div 6$

$$\begin{array}{r} 10 + 3 = 13 \\ 6 \overline{) 78} \\ - 60 \\ \hline 18 \\ - 18 \\ \hline 0 \end{array}$$

8. $104 \div 8$

$$\begin{array}{r} 10 + 3 = 13 \\ 8 \overline{) 104} \\ - 80 \\ \hline 24 \\ - 24 \\ \hline 0 \end{array}$$

Practice Sheets Answers

Division practice (hot)

$$\begin{array}{r} 1. \quad 72 \div 3 \\ \quad \frac{20 + 4 = 24}{3) \overline{72} \\ \quad - 60 \\ \quad \quad 12 \\ \quad - 12 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 6. \quad 105 \div 3 \\ \quad \frac{30 + 5 = 35}{3) \overline{105} \\ \quad - 90 \\ \quad \quad 15 \\ \quad - 15 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 11. \quad 288 \div 9 \\ \quad \frac{30 + 2 = 32}{9) \overline{288} \\ \quad - 270 \\ \quad \quad 18 \\ \quad - 18 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 2. \quad 120 \div 5 \\ \quad \frac{20 + 4 = 24}{5) \overline{120} \\ \quad - 100 \\ \quad \quad 20 \\ \quad - 20 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 7. \quad 136 \div 4 \\ \quad \frac{30 + 4 = 34}{4) \overline{136} \\ \quad - 120 \\ \quad \quad 16 \\ \quad - 16 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 12. \quad 266 \div 7 \\ \quad \frac{30 + 8 = 38}{7) \overline{266} \\ \quad - 210 \\ \quad \quad 56 \\ \quad - 56 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 3. \quad 92 \div 4 \\ \quad \frac{20 + 3 = 23}{4) \overline{92} \\ \quad - 80 \\ \quad \quad 12 \\ \quad - 12 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 8. \quad 175 \div 5 \\ \quad \frac{30 + 5 = 35}{5) \overline{175} \\ \quad - 150 \\ \quad \quad 25 \\ \quad - 25 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 4. \quad 154 \div 7 \\ \quad \frac{20 + 2 = 22}{7) \overline{154} \\ \quad - 140 \\ \quad \quad 14 \\ \quad - 14 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 9. \quad 204 \div 6 \\ \quad \frac{30 + 4 = 34}{6) \overline{204} \\ \quad - 180 \\ \quad \quad 24 \\ \quad - 24 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 5. \quad 138 \div 6 \\ \quad \frac{20 + 3 = 23}{6) \overline{138} \\ \quad - 120 \\ \quad \quad 18 \\ \quad - 18 \\ \quad \quad 0 \end{array}$$

$$\begin{array}{r} 10. \quad 288 \div 8 \\ \quad \frac{30 + 6 = 36}{8) \overline{288} \\ \quad - 240 \\ \quad \quad 48 \\ \quad - 48 \\ \quad \quad 0 \end{array}$$

A Bit Stuck? Flip-flops

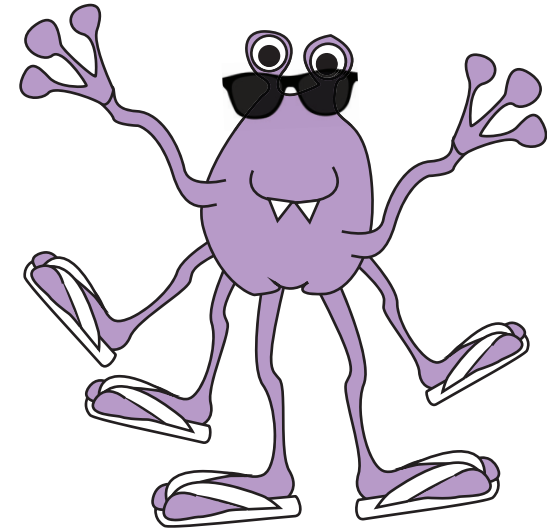
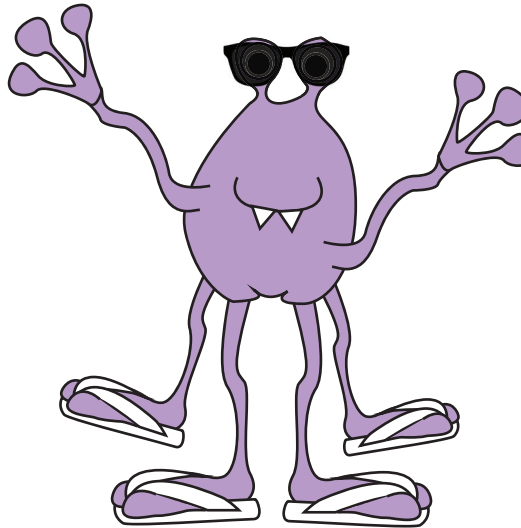
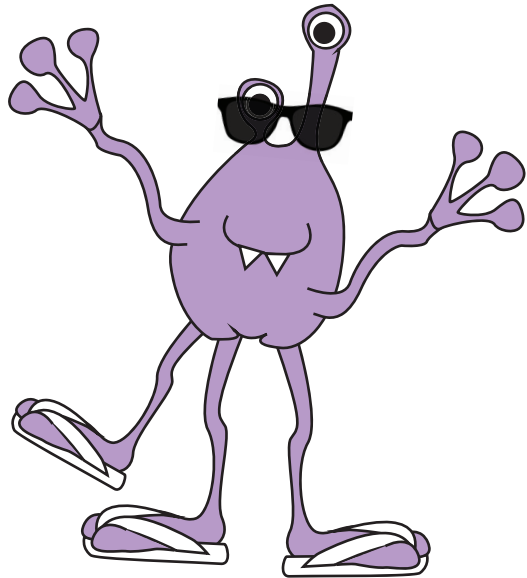
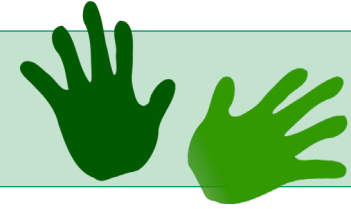
Work in pairs

What to do:

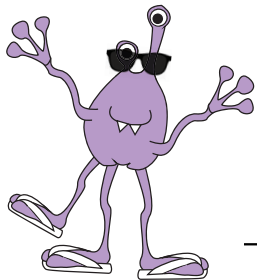
The aliens need flip-flops for the beach.
Some aliens have 3 legs, some have 4 legs and others have 5 legs.

Things you will need:

- A pencil



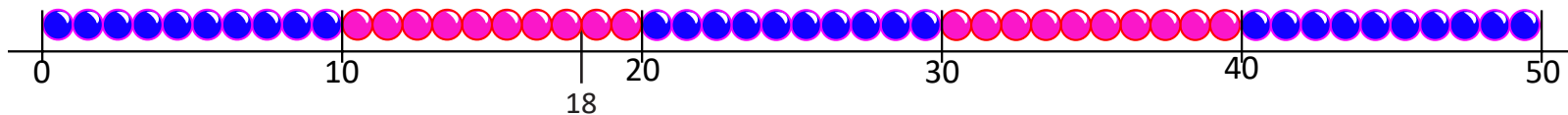
Draw rings round beads on the lines to find out how many aliens can have flip flops.



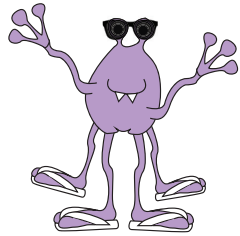
18 flip flops

$$\square \times 3 = 18$$

$$18 \div 3 = \square$$



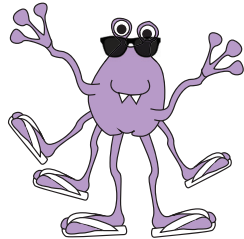
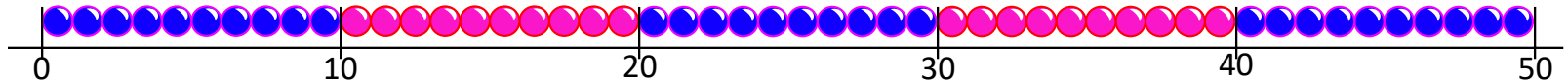
A Bit Stuck? Flip-flops



20 flip flops

$$\square \times 4 = 20$$

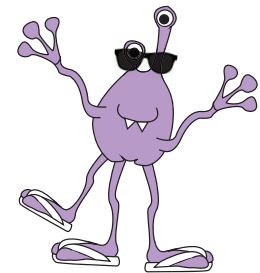
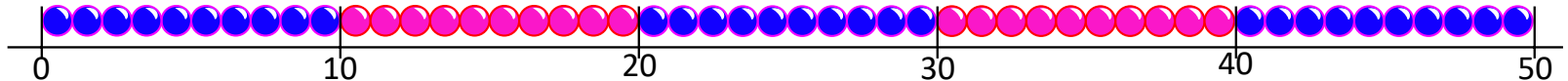
$$20 \div 4 = \square$$



30 flip flops

$$\square \times 5 = 30$$

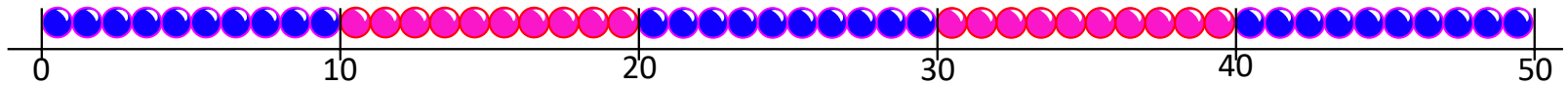
$$30 \div 5 = \square$$



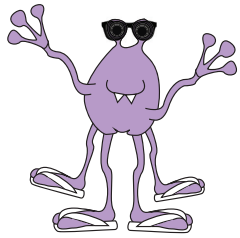
24 flip flops

$$\square \times 3 = 24$$

$$24 \div 3 = \square$$



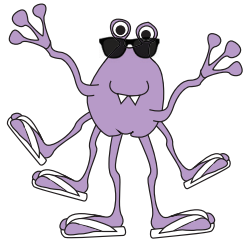
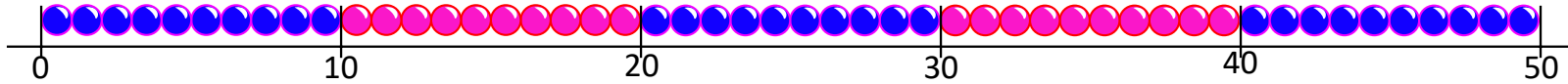
A Bit Stuck? Flip-flops



24 flip flops

$$\square \times 4 = 24$$

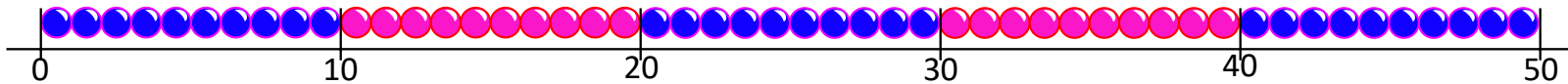
$$24 \div 4 = \square$$



45 flip flops

$$\square \times 5 = 45$$

$$45 \div 5 = \square$$



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

Find how many 5s are in 17 and 23.

$$17 \div 5 = \square \text{ and } \square \text{ left over.}$$

$$23 \div 5 = \square \text{ and } \square \text{ left over.}$$

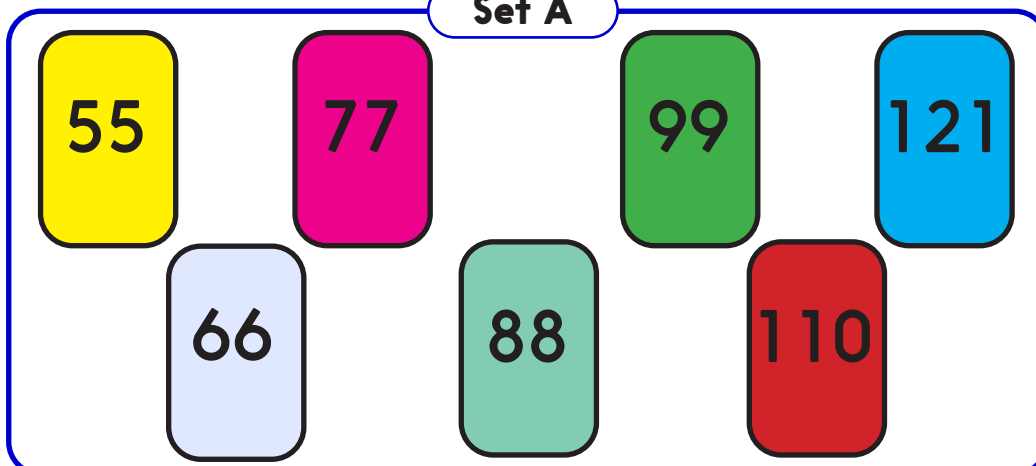
Learning outcomes:

- I can ring groups on a beaded line to divide by 3, 4 and 5 (no remainders).
- I am beginning to divide by 5, with remainders.

Investigation

Dividing multiples

Set A



- The numbers on the cards are all multiples of 11.
- Choose a card. Divide the number by 3, 4, 5 or 6.
- Choose a different card. Again divide by 3, 4, 5 or 6.
- Repeat 3 more times. You can use the same number from Set A, but if you do then you must divide by a *different* number.
- When you have completed 5 division questions, add the 5 remainders.
- The total of the remainders is your **score** for this round.
- Now try again with 5 more division questions – your aim is to gain a higher remainder score than from the first round!

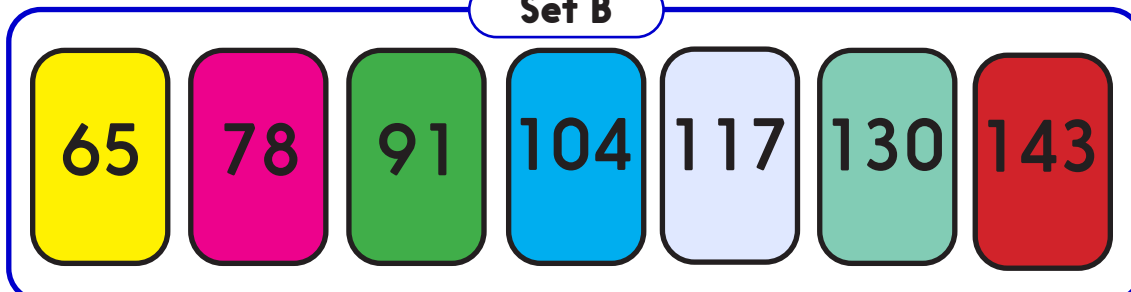
What is a good strategy to gain a higher score?

Challenge

There are 6 divisions that give you no score at all, can you find them all?

Now try the **Hot Version!**

Set B



- Play again using these cards in Set B. They are all multiples of 13.
- Do you think that you can get a higher score with this set?

the 6 divisions that have no remainder:

33 ÷ 3, 66 ÷ 3, 88 ÷ 4, 55 ÷ 5, 110 ÷ 5 and 66 ÷ 6 are