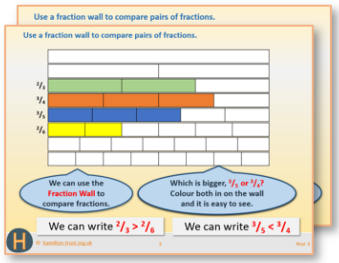
Week 14, Day 1

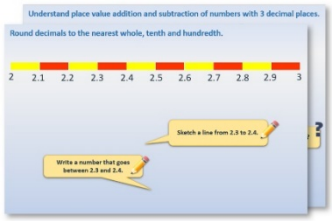
Divide 2-digit numbers by 1-digit numbers

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

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

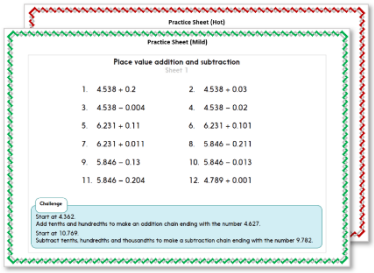


OR start by carefully reading through the **Learning Reminders**.



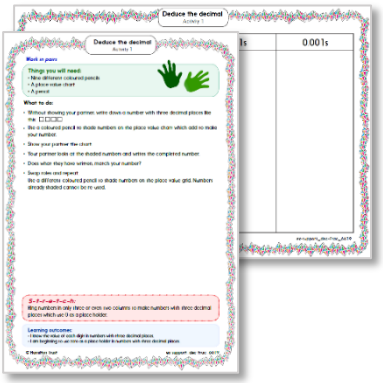
---

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?**



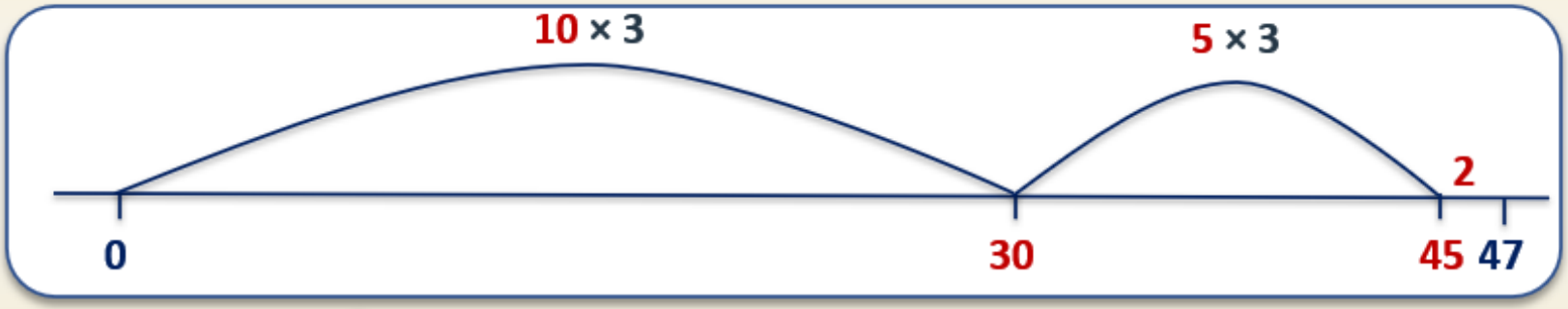
---

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

© Hamilton Trust

Learning Reminders

Divide 2-digit numbers by 1-digit numbers (with remainders), using a 'compact' vertical layout.



We can find 47 ÷ 3 on an empty number line.

10 3s are 30.

5 more 3s takes us to 45.

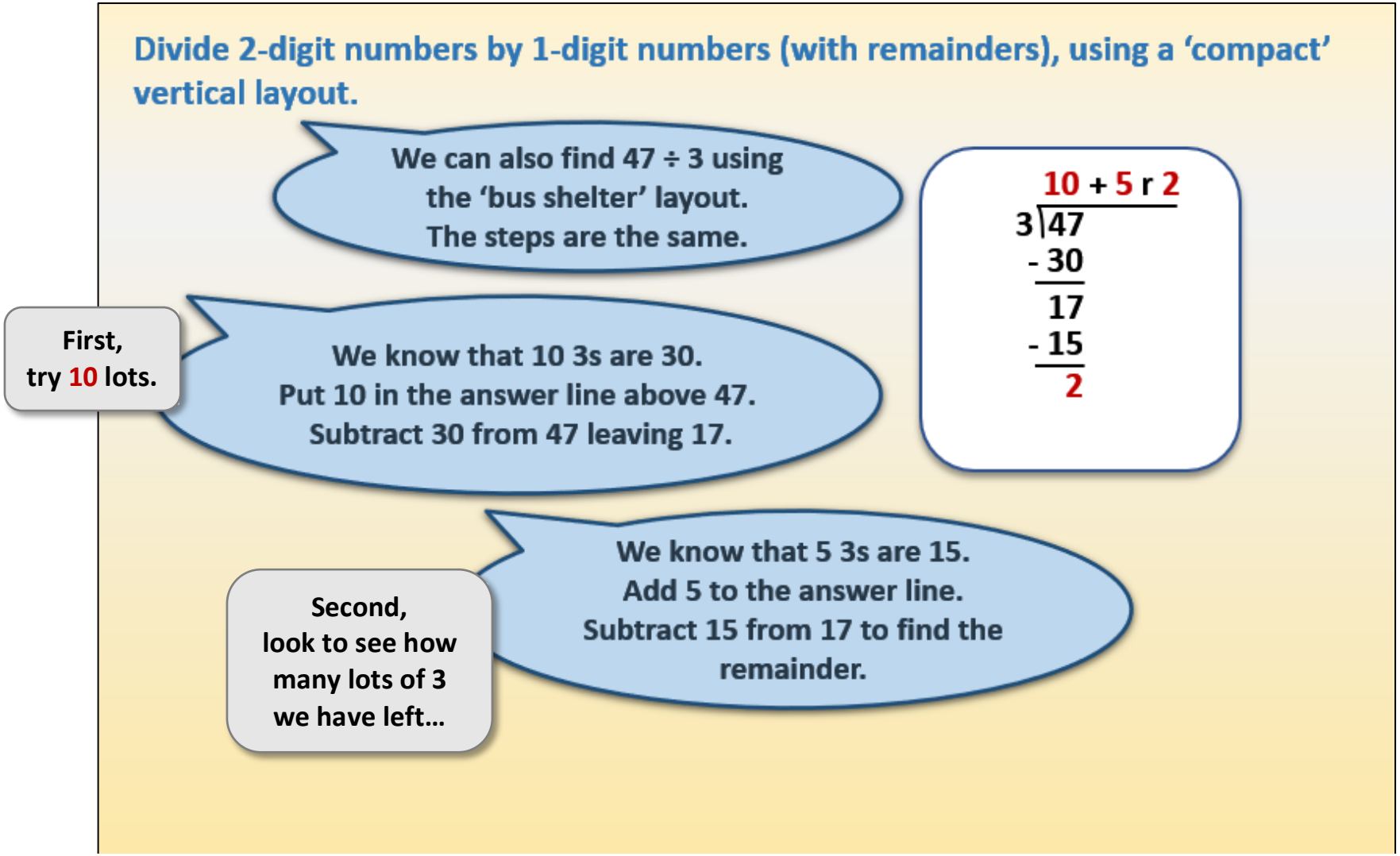
The 2 left over are the remainder.

47 ÷ 3 = 15 r 2.

Remember 'r' stands for 'remainder'.

© Hamilton Trust

Learning Reminders



© Hamilton Trust

Learning Reminders

Divide 2-digit numbers by 1-digit numbers (with remainders), using a 'compact' vertical layout.

Let's try 68 ÷ 5.

We know that 10 5s are 50.
Put 10 in the answer line above 68.
Subtract 50 from 68 leaving 18.

We know that 3 5s are 15.
Add 3 to the answer line.
Subtract 15 from 18 to find the remainder.

68 ÷ 5 = 13 r 3.
You can always check using the empty number line until you are confident with this method.

```
  10 + 3 r 3
5 ⟌68
  -50
   18
  -15
    3
```

First, try 10 lots.

Second, look to see how many lots of 5 we have left…

© Hamilton Trust

Practice Sheet Mild

Dividing with remainders

Use an empty number line or 'bus shelter' to solve these. Don't forget the remainder!

1. 63 ÷ 4
2. 41 ÷ 3
3. 51 ÷ 4
4. 52 ÷ 3
5. 62 ÷ 5
6. 71 ÷ 5
7. 53 ÷ 4
8. 50 ÷ 3

Challenge

Find 2 more division questions that give a remainder of 3.

© Hamilton Trust

Practice Sheet Hot

Dividing with remainders

Use an empty number line or 'bus shelter' to solve these. Don't forget the remainder!

1. 62 ÷ 5
2. 71 ÷ 5
3. 53 ÷ 4
4. 50 ÷ 3
5. 63 ÷ 3
6. 81 ÷ 4
7. 71 ÷ 6
8. 96 ÷ 4
9. 70 ÷ 3
10. 89 ÷ 6
11. 100 ÷ 3
12. 101 ÷ 6

Challenge

Find 3 more division questions that give a remainder of 4.

© Hamilton Trust

Practice Sheets Answers

Dividing with remainders (mild)

1. 63 ÷ 4 = 15 r3
2. 41 ÷ 3 = 13 r2
3. 51 ÷ 4 = 12 r3
4. 52 ÷ 3 = 17 r1
5. 62 ÷ 5 = 12 r2
6. 71 ÷ 5 = 14 r1
7. 53 ÷ 4 = 13 r1
8. 50 ÷ 3 = 16 r2

Challenge

There are MANY possible answers, e.g. 78 ÷ 5, 83 ÷ 10, 75 ÷ 4.

Dividing with remainders (hot)

1. 62 ÷ 5 = 12 r2
2. 71 ÷ 5 = 14 r1
3. 53 ÷ 4 = 13 r1
4. 50 ÷ 3 = 16 r2
5. 63 ÷ 3 = 21
6. 81 ÷ 4 = 20 r1
7. 71 ÷ 6 = 11 r5
8. 96 ÷ 4 = 24
9. 70 ÷ 3 = 23 r1
10. 89 ÷ 6 = 14 r5
11. 100 ÷ 3 = 33 r1
12. 101 ÷ 6 = 16 r5

Numbers 5 and 8 have no remainder.

Challenge

There are MANY possible answers, e.g. 79 ÷ 5, 84 ÷ 10, 67 ÷ 7, 124 ÷ 6.

© Hamilton Trust

A Bit Stuck?
Left overs

Work in pairs, but record your work on your own sheet.

Things you will need:
- 0 to 100 beaded lines
- A pencil

What to do:

- Use chunking to calculate the answers to these divisions.
- Remember to draw a big jump of 10 times the number you are dividing by. Then look to see how much is left.
- Calculate at least five answers.

38 ÷ 3

64 ÷ 5

50 ÷ 4

76 ÷ 5

43 ÷ 3

72 ÷ 5

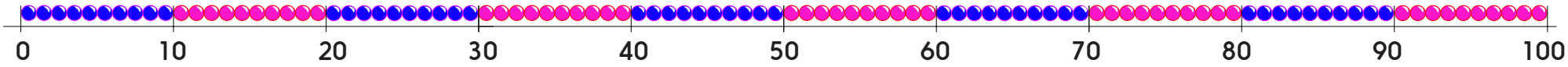
61 ÷ 4

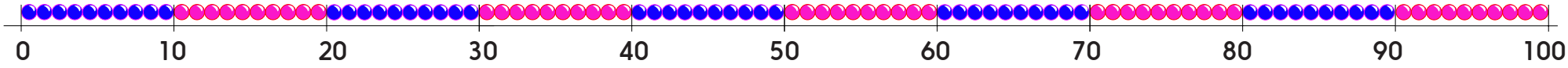
S-t-r-e-t-c-h:
Draw your own number line jottings to calculate the answers.

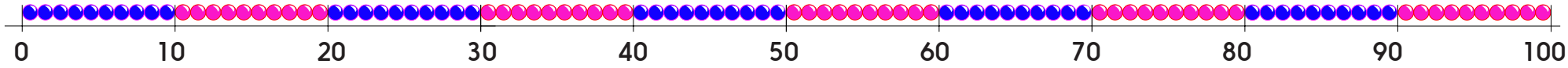
Learning outcomes:
- I can use chunking on a beaded line to divide numbers just beyond the times tables (with remainders).
- I am beginning to draft my own number line jottings when using chunking (with remainders).

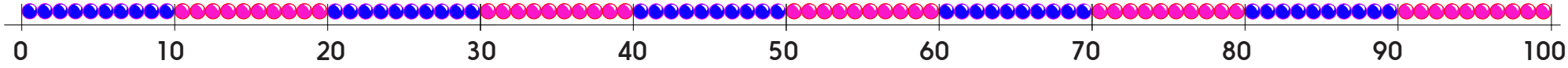
© Hamilton Trust

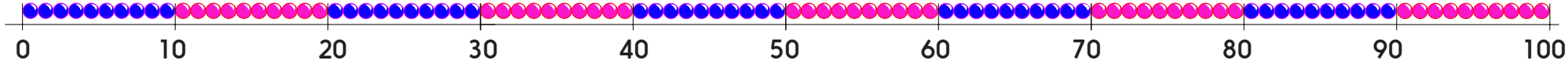
A Bit Stuck?
Left overs











© Hamilton Trust

Explore more Hamilton Trust Learning Materials at https://wrht.org.uk/hamilton

Investigation
Rocking remainders

1. Calculate 11 ÷ 3, 22 ÷ 3, 33 ÷ 3, and so on up to 99 ÷ 3.
   What do you notice about the remainders?

2. Now calculate 11 ÷ 4, 22 ÷ 4, 33 ÷ 4, and so on up to 99 ÷ 4.
   After the first five, can you predict what the next remainder will be?

3. With a partner, split the questions between you to divide 11 to 99 by 5, 6, 7... all the way up to 12 if you like!

   What patterns do you find?

   Which patterns of remainders are similar to those obtained dividing by 3 and 4?

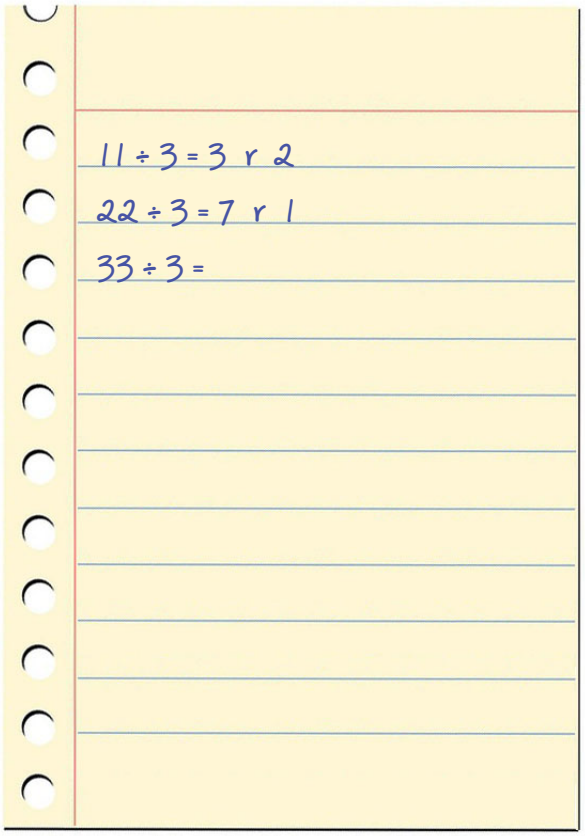
   Which are different?

   Which of these are similar to each other?

   Do ALL divisors give a pattern?

   Which divisor doesn't give any remainders?

   Why?



© Hamilton Trust

Explore more Hamilton Trust Learning Materials at https://wrht.org.uk/hamilton