

L.O - To explore 2 digit by 1 digit division with remainder.

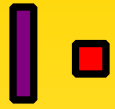
success criteria

- >To use concrete and written methods to solve division problems with remainders.
- >To use known multiplication facts to solve division questions.

- >To partition 2 digit numbers into tens and ones.
- >To problems solve and reason with division and remainders.

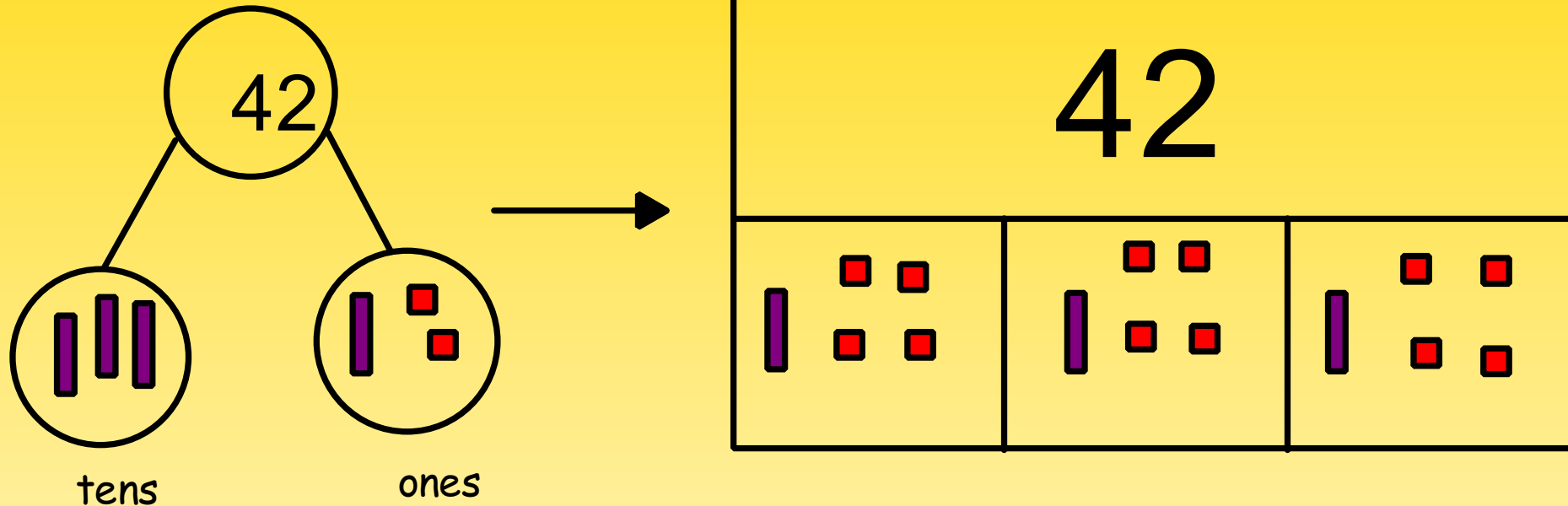
Use this video to help introduce division with remainders, that we will be looking at today.

https://www.youtube.com/watch?v=P1qyjdh_slw



By now we know this method well, we have partitioned 42 and divided it equally into 3 parts.

$$42 \div 3 = 14$$



But you cannot always divide equally. Does anybody know what a remainder is?



But you cannot always divide equally. Does anybody know what a remainder is?

A remainder is the amount left over that can not be divided equally. Lets take $9 \div 2$ as an example. Start by counting 2's into 9.

2, 4, 6, 8 10



4 lots of 2
is one
too few



5 lots of 2 is
one too many

This means the when we write our answer we need to include a remainder.

We can share 2 into 9 4 times and we have one remaining .

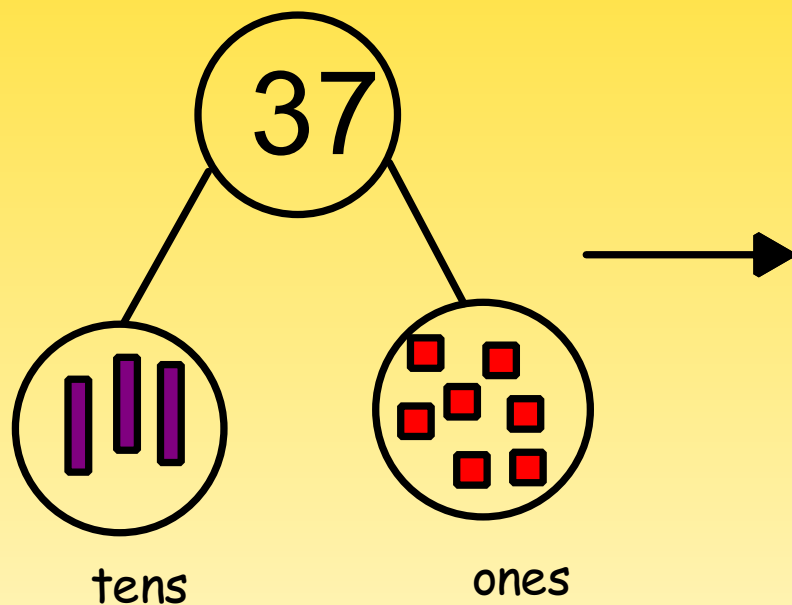
Therefore our answer will look like this.

$$9 \div 2 = 4r1$$

 We can use different strategies to help us solve division with remainder problems. Lets explore a few

How can I use this strategy to solve my division problem?

$$37 \div 3 =$$

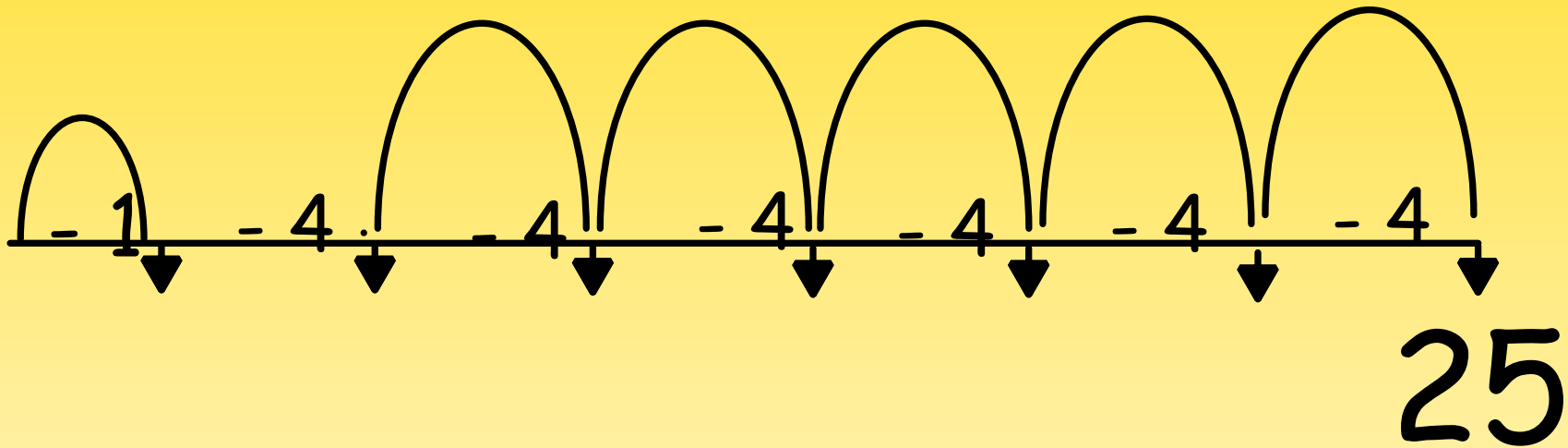


37		

You can use your subtraction knowledge to help you too

$$25 \div 4 =$$

To do this you will need a number line with the number you need to divide at the end, you then need to count back in groups of 4 (or what ever number you are dividing by) from until you can no longer count back by 4.

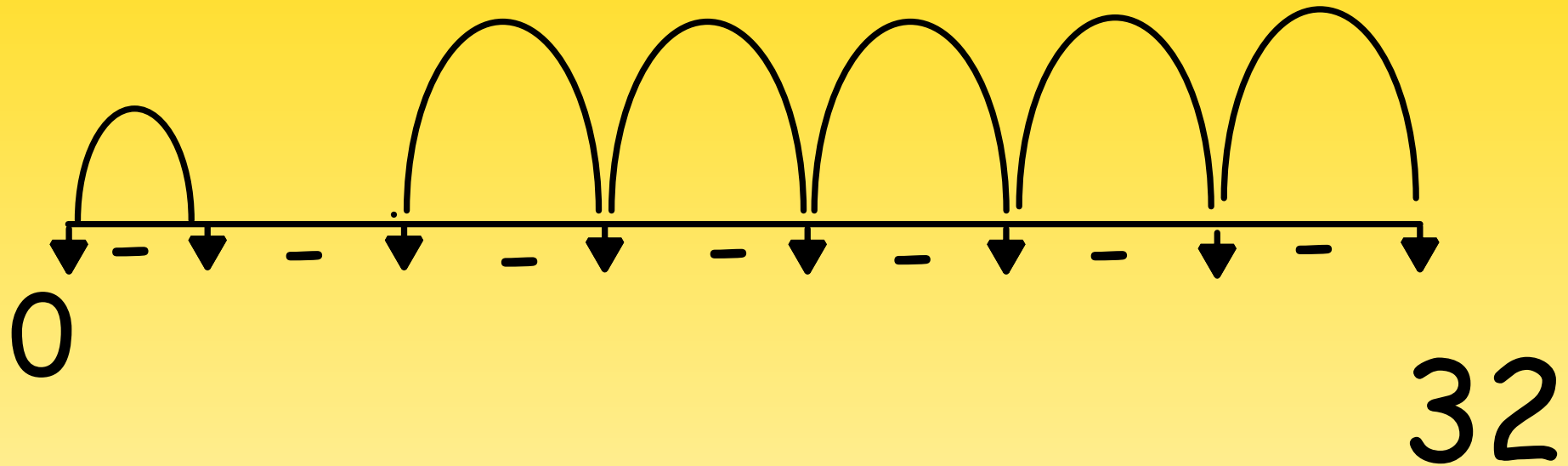


As you can see here we have counted back by 4 six times and reached 1. We can not count back by another 4 so therefore the difference between 1 and zero will be our remainder, in this case the answer will be?

6r1

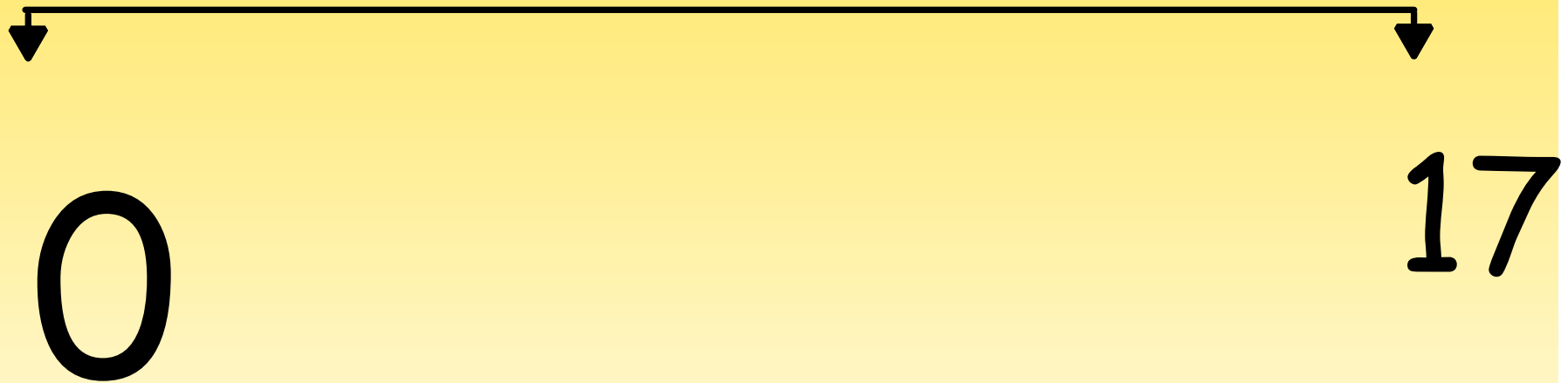
Let's fill in the gaps

$$32 \div 5 =$$



Have a go yourselves.

$$17 \div 3 =$$



What is the question below asking us to do?

Fred has 11 stickers.

He sorts his stickers into 3 equal groups but has some stickers remaining.

How many stickers are in each group and how many stickers would be remaining?

Have a go at solving this on your whiteboard, remember to use full sentences when answering.

Fred has 11 stickers.

He sorts his stickers into 3 equal groups but has some stickers remaining.

How many stickers are in each group and how many stickers would be remaining?

Fred has divided his 11 stickers into 3 groups. In each group he will have 3 stickers and that means he will have 2 stickers remaining

.

What is the question below asking us to do?

True or false if you divide 33 by 7 you will not have any remainders in your answer?

Have a go at solving this on your whiteboard, remember to use full sentences when answering.

Fluency

1. $13 \div 4 =$

2. $23 \div 4 =$

3. $19 \div 6 =$

4. $21 \div 2 =$

5. $19 \div 9 =$



Fluency

1. $13 \div 4 = 3 \text{ r } 1$

2. $23 \div 4 = 5 \text{ r } 3$

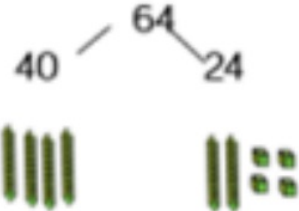
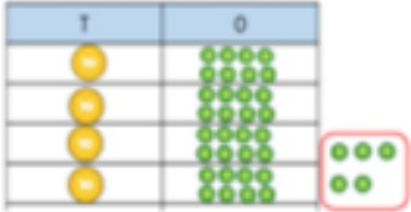
3. $19 \div 6 = 2 \text{ r } 1$

4. $21 \div 2 = 10 \text{ r } 1$

5. $19 \div 9 = 2 \text{ r } 1$



Which calculation is the odd one out?
Explain how you know.

$64 \div 8 =$ 	$77 \div 4 =$ 
$49 \div 6 =$ 	$65 \div 3 =$ 

I know this because _____

Problem solving

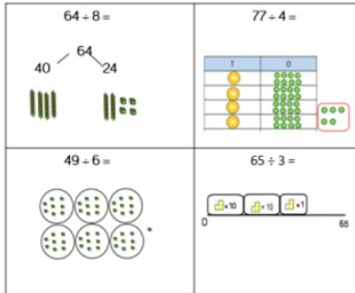
Jack has 15 stickers.

He sorts his stickers into equal groups but has some stickers remaining.

How many stickers could be in each group and how many stickers would be remaining?

Answers

Which calculation is the odd one out?
Explain how you know.



I know this because _____

$64 \div 8 = 8$ is the odd one out as it is the only calculation without a remainder.

Jack has 15 stickers.
He sorts his stickers into equal groups but has some stickers remaining.
How many stickers could be in each group and how many stickers would be remaining?

There are many solutions to this, encourage a systematic approach. E.g.
2 groups of 7, remainder 1
3 groups of 4, remainder 3
2 groups of 6, remainder 3