

Today, we are revising short  
division.

- We will express our remainders as fractions.

# Let's recap on what we know so far about remainders.

There are three types of remainder...

- Simple remainders eg R1
- Decimal remainders eg .5
- Fraction remainders eg  $\frac{1}{2}$

Calculate these and give simple remainders...

				<b>R</b>	
<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>		

			<b>R</b>		
<b>3</b>	<b>6</b>	<b>5</b>			

				<b>R</b>	
<b>5</b>	<b>4</b>	<b>2</b>	<b>4</b>		

Answers..

	<b>1</b>	<b>2</b>	<b>1</b>	<b>R</b>	<b>1</b>
<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>		

	<b>2</b>	<b>1</b>	<b>R</b>	<b>2</b>	
<b>3</b>	<b>6</b>	<b>5</b>			

	<b>0</b>	<b>8</b>	<b>4</b>	<b>R</b>	<b>4</b>
<b>5</b>	<b>4</b>	<sup>4</sup> <b>2</b>	<sup>2</sup> <b>4</b>		

Calculate these again but this time give decimal remainders...

				•	
2		2	4	3	• 0

			•		
3		6	5	• 0	

				•	
5		4	2	4	• 0

# Answers...

	<b>1</b>	<b>2</b>	<b>1</b>	<b>•</b>	<b>5</b>	
<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>•</b>	<sup>1</sup> <b>0</b>	

	<b>2</b>	<b>1</b>	<b>•</b>	<b>6</b>	<b>6</b>	(recurring)
<b>3</b>	<b>6</b>	<b>5</b>	<b>•</b>	<sup>2</sup> <b>0</b>	<sup>2</sup> <b>0</b>	

	<b>0</b>	<b>8</b>	<b>4</b>	<b>•</b>	<b>8</b>	
<b>5</b>	<b>4</b>	<sup>4</sup> <b>2</b>	<sup>2</sup> <b>4</b>	<b>•</b>	<sup>4</sup> <b>0</b>	

Focus on  $143 \div 2$

simple  
remainder

	<b>0</b>	<b>7</b>	<b>1</b>	<b>R</b>	<b>1</b>
<b>2</b>	<b>1</b>	<sup>1</sup> <b>4</b>	<b>3</b>		

decimal  
remainder

	<b>0</b>	<b>7</b>	<b>1</b>	<b>•</b>	<b>5</b>
<b>2</b>	<b>1</b>	<sup>1</sup> <b>4</b>	<b>3</b>	<b>•</b>	<sup>1</sup> <b>0</b>

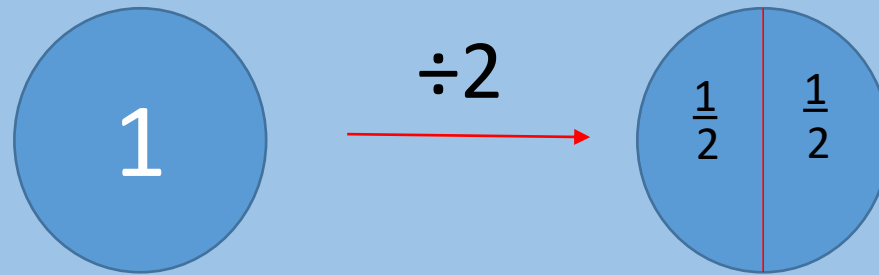
A fraction remainder would work like this...

	<b>0</b>	<b>7</b>	<b>1</b>	<b>R</b>	<b>1</b>
<b>2</b>	<b>1</b>	<sup>1</sup> <b>4</b>	<b>3</b>		

We take the simple remainder and divide it by 2 also.



$1 \div 2$  is...



$\frac{1}{2}$  divided by 2 is the same as  $\frac{1}{2}$

So the answer is...

	<b>0</b>	<b>7</b>	<b>1</b>	$\frac{1}{2}$	
<b>2</b>	<b>1</b>	<sup>1</sup> <b>4</b>	<b>3</b>		

This was the simple remainder.

This is the divisor.

The simple remainder gets divided by 2 as well.

Let's return to these calculations we did earlier.  
 What would these remainders look like as  
 fractions?

	<b>1</b>	<b>2</b>	<b>1</b>	<b>R</b>	<b>1</b>
<b>2</b>	2	4	3		

	<b>2</b>	<b>1</b>	<b>R</b>	<b>2</b>	
<b>3</b>	6	5			

	<b>0</b>	<b>8</b>	<b>4</b>	<b>R</b>	<b>4</b>
<b>5</b>	4	<sup>4</sup> 2	<sup>2</sup> 4		

We take each remainder and divide it by the divisor...

	<b>1</b>	<b>2</b>	<b>1</b>	<b>R</b>	<b>1</b>
<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>		

1 divided by 2

	<b>2</b>	<b>1</b>	<b>R</b>	<b>2</b>	
<b>3</b>	<b>6</b>	<b>5</b>			

2 divided by 3

	<b>0</b>	<b>8</b>	<b>4</b>	<b>R</b>	<b>4</b>
<b>5</b>	<b>4</b>	<sup>4</sup> <b>2</b>	<sup>2</sup> <b>4</b>		

4 divided by 5

# Answers...

	<b>1</b>	<b>2</b>	<b>1</b>	$\frac{1}{2}$	
<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>		

1 divided by 2

	<b>2</b>	<b>1</b>	$\frac{2}{3}$		
<b>3</b>	<b>6</b>	<b>5</b>			

2 divided by 3

	<b>0</b>	<b>8</b>	<b>4</b>	$\frac{4}{5}$	
<b>5</b>	<b>4</b>	<sup>4</sup> <b>2</b>	<sup>2</sup> <b>4</b>		

4 divided by 5

Now, try some independent practice.

- Express the remainder as a fraction.
- Take the simple remainder and divide it by the divisor.
- For example  $3 \div 4 = \frac{3}{4}$