



**Joyfulmathswithruth**

# Functional Skills i/GCSE Foundation

Edexcel

Unit 1: Number

**Lesson 5 - Factors  
and primes**

FS1

FS2

GCSE

iGCSE

**To join in please bring:**



**24 or more lego bricks or other  
blocks you can build with (they  
need to be the same size)  
OR - you can bring some square  
paper and coloured pencil**



# Start thinking:

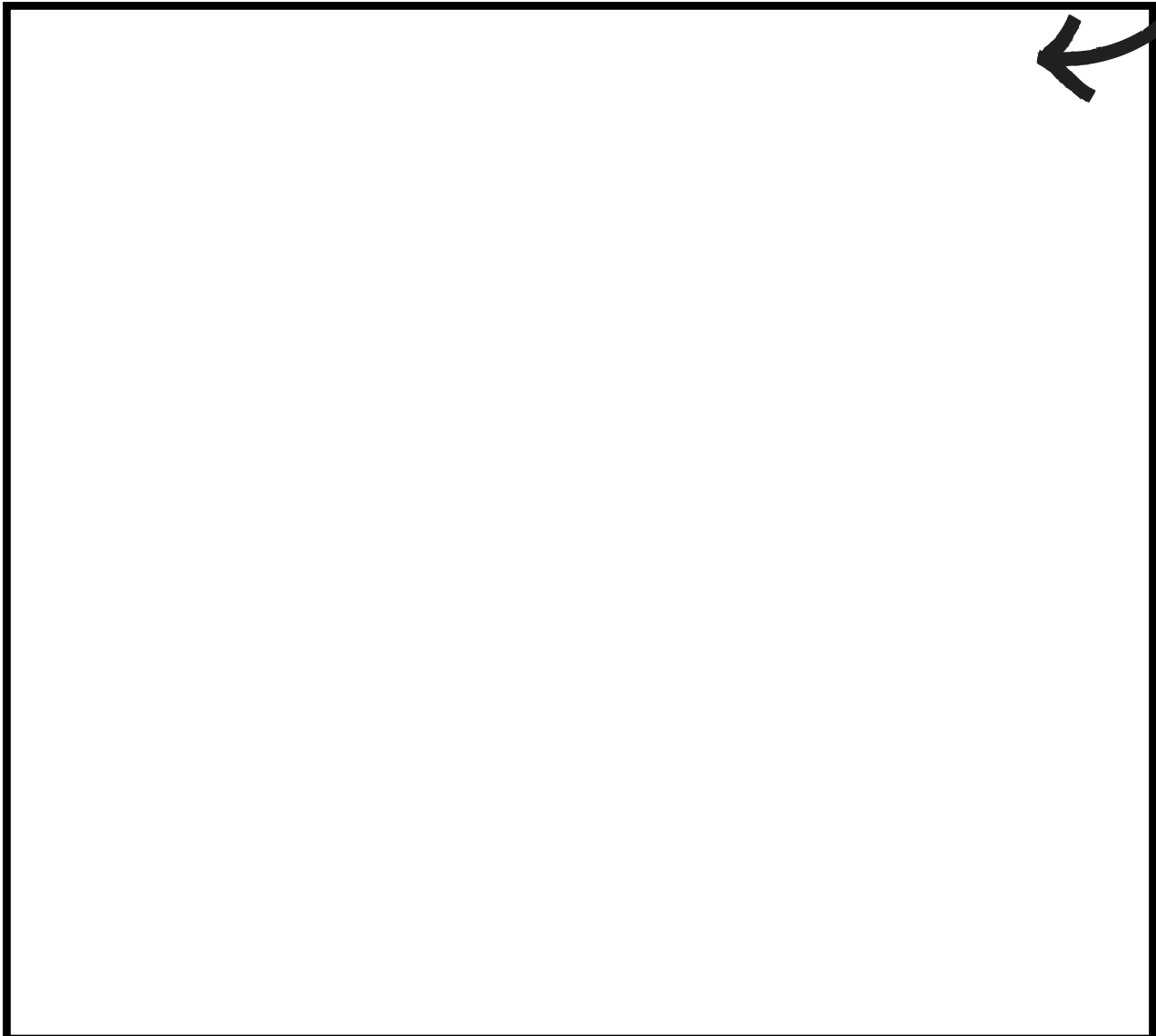
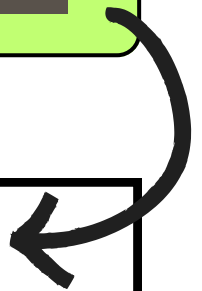
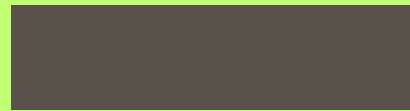
## Start thinking:

Draw as many rectangles as you can that have an area of 12

Example:

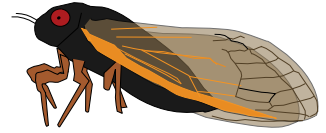
2cm

6cm





# Why do some cicadas only emerge every 13 or 17 years?





# Prime numbers

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

## Finding the prime numbers:

Cross out 1 (It only has 1 factor)

Circle 2 and then cross out all the multiples of 2.

Circle 3 then cross out all the multiples of 3.

4 has been crossed out so move onto 5, circle it then cross out all the multiples of 5.

Keep going until all numbers are circled or crossed out.

**The circled numbers are prime.**



# Quiz

20	11	25
10	8	32
15	6	21



FS1	<input type="checkbox"/>
FS2	<input type="checkbox"/>
GCSE	<input checked="" type="checkbox"/>
iGCSE	<input checked="" type="checkbox"/>

You have some string.

One piece is 24cm long  
The other pieces is 18cm long.

You are going to cut the string into smaller pieces  
that are all the same length.

**What is the longest length you are going to be  
able to cut them into?**

# Highest Common Factor

Biggest  
number

In both/all

Divides into a  
number exactly

Find the HCF of 24 and 28

24  
~~1 x 24~~  
~~2 x 12~~  
3 x 8  
4 x 6

28  
~~1 x 28~~  
~~2 x 14~~  
4 x 7

FS1	<input type="checkbox"/>
FS2	<input type="checkbox"/>
GCSE	<input checked="" type="checkbox"/>
iGCSE	<input checked="" type="checkbox"/>

# Questions:

Find the highest common factor of

a) 9 and 21

b) 40 and 60

## 4 in a row

<b>11</b>	<b>3</b>	<b>13</b>	<b>2</b>
<b>multiple</b>	<b>4</b>	<b>6</b>	<b>factor</b>
<b>19</b>	<b>42</b>	<b>prime</b>	<b>10</b>
<b>Square</b>	<b>100</b>	<b>1</b>	<b>5</b>

# At home:



I only have  
time to do 3  
questions

1. Find all the factors of 48

2. Circle the prime numbers:

3

97

33

21

11

15

45

12

19

3. Find the highest common factor of 36 and 40



## **At home:**

Flora the florist has 36 white, 42 red and 50 yellow roses.

**What is the greatest number of identical bunches she can make that uses all of the flowers?**



## Practice questions

# At home:

Here is a lovely problem to dive into on nrich

For more factors and HCF practice head to here for some Corbett maths questions

*With Highest Common Factor, often the language is the hardest bit*

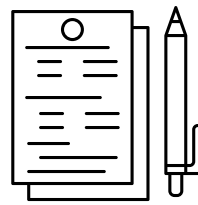
*Worded problems are often easier to understand than the mathematical language because we don't use it often*

*Break it down into the individual words:*

*Highest = Biggest*

*Common = Means in both or all*

*Factor = Divides into exactly*



# Exam questions

## At home:

### FS 1 and 2:

Maths genie has some exam questions on Factors, Multiples and Primes [here](#)

### GCSE/iGCSE:

Maths genie has some exam questions on HCF and LCM from question 5 to try [here](#)