



Joyfulmathswithruth

FREE home ed
maths lessons
for exams

Functional Skills and GCSE Foundation

Edexcel

Unit 1: Number

Lesson 9 -

Substituting into a formula

FS1

FS2

GCSE

iGCSE

To join in please bring:



At least 1 envelope - if possible,

4

A bunch of paper clips

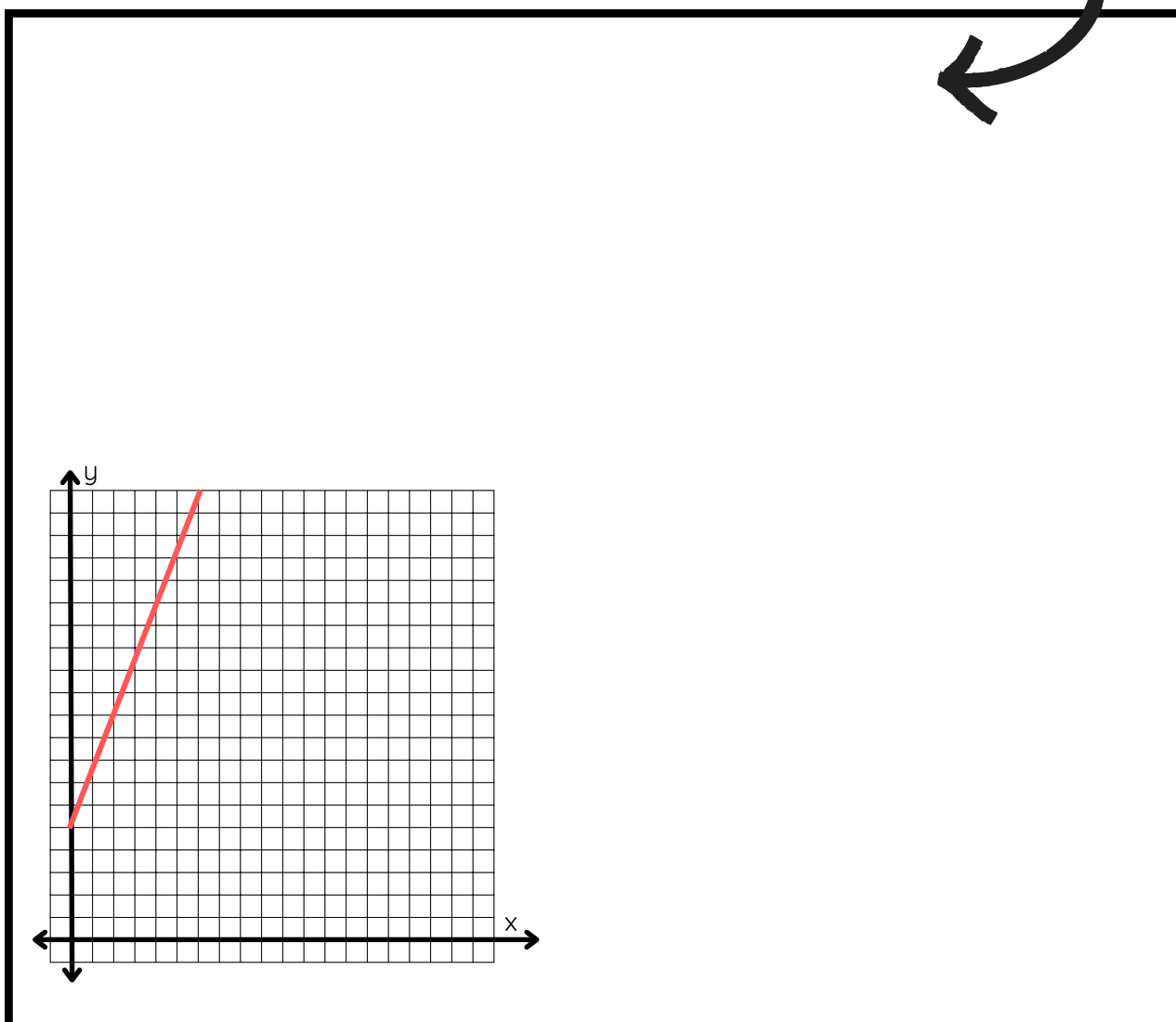
A calculator



Start thinking:

You take a taxi 10 miles and it cost you £30

If you take the same taxi 15 miles the next day, what do you expect to happen to the price?



Number of paper clips = Number of paper clips inside the envelope x 4 + 5



Paper clips

Choose how many
paper clips you will put
in your envelope



Number of
paper clips =

Worded formulas

The cost of hiring an emergency plumber can be calculated using this formula:

$$\text{cost} = \text{call out charge} + \text{number of hours work} \times \text{hourly rate}$$

Anita charges:

£26 for her hourly rate

£50 call out

How much does Anita charge for:
a 3 hour call out

Worded formulas

How much does Anita
charge for:
a 2.5 hour call out

How much does Anita
charge for:
**a 5 hour 15 minute
call out**

Algebraic formulas and lazy mathematicians

The following formula converts degrees Celsius C to degrees Fahrenheit F

$$F = 1.8 C + 32$$

If the temperature is 20 degrees Celsius, what is it in Fahrenheit?

What about these expressions?

$$3a + ax$$

$$a = 3$$

$$x = -5$$

Brackets
Indices
Division and
Multiplication
Addition and
Subtraction

$$4t^2 - 5$$

$$t = 3$$

What about these expressions?

$$3m + 5(p - n)$$

$$m = 6$$

$$n = 2$$

$$p = 3$$

Brackets
Indices
Division and
Multiplication
Addition and
Subtraction

Would you rather?

Betty's



Dotty's



Betty's



Dotty's



Would you rather?

Betty's



Dotty's



Betty's



Dotty's





I only have
time to do 3
questions

At home:

1. The price of some t-shirts you are having printed is given by:

£9.50 per t-shirt + delivery charge of £5.30

How much will it cost for

3 t-shirts

5 t-shirts

10 t-shirts

2. $A = (a + b) \div 2 \times h$

Find A when:

$$a = 5$$

$$b = 13$$

$$h = 4$$

3. $C = \frac{(3a - b)}{6}$

When

$$a = -8$$

$$b = 12$$



At home:

Taxi's 4 U costs £5 booking fee plus £3 per mile

Cheap Taxi's cost £1 booking fee plus £4 per mile

It costs me the same amount with each taxi to get home from town.

How far do I live from town?



Practice questions

At home:

**** For Functional Skills 1 you only have to be able to do worded questions ****

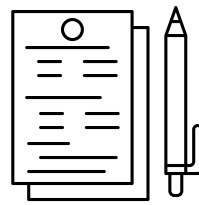
You can find worded questions in the Apply section of this [Corbett Maths worksheet](#)

[Answers here](#)

You can find a good range of non-calculator questions from [Maths up grade here](#)

[Answers here](#)

And a range of calculator questions to try [here from Maths4everyone](#) (answers included in the link)



Exam questions

At home:

FFS 2 and GCSE and iGCSE:

Here are a set of real past exam questions taken from the GCSE by Kenneth Stafford

Answers here

It is worth noting these can be calculator or non-calculator in FS2 and GCSE.

*If the exam question says it is from **Paper 1**, it is designed to be a **non-calc question**.*