INTRODUCTION TO FRACTIONS AND ALGEBRA

FRACTIONS

TASK 1:

You all have a post-it with a fraction on it. It is equal to fractions on 4 other post-its. Find all the people in the room with the same fraction!

Now simplify your fraction. What do you get?

DOING THE SAME THING ON BOTH SIDES

If

$$y = \frac{3}{4}x + 1$$

then what can I say about $4y$? What about $4y^2 - 1$?

How did you come to your conclusion?

TASK 2:

Take a post-it. Write down **two** expressions in terms of y; one can be easy, the other has to be complicated! It will be equal to an expression in terms of the x in $y = \frac{3}{4}x + 1$. Exchange your post it with one of your classmate's. On the back of your new post-it write down the expression in terms of x. There is a key point involved in what you have been doing; what do you think it is?

MANIPULATING EXPRESSIONS

If I have the equation

$$x + 1 = 2y$$

what steps do I need to get the equation:

$$x^2 + 2x - 7 = 4(y^2 - 2)$$

What about if I have $4x^4 - 25 = -16$ and want to get $2x^2 - 3 = 0$? Is this possible? Can you think of any other equations I might get? What do you think this means?