

A close-up, shallow depth-of-field photograph of a computer keyboard. The central focus is on three adjacent keys: a black key with a white 'x', a black key with a white vertical bar '|', and a black key with a white hyphen/underscore '-'. The surrounding keys are blurred, including a blue key to the upper left and a key with a white plus sign to the lower right. The lighting is soft, creating a professional and academic feel.

Algebra - quadratics

EXPANDING AND FACTORISING

Blue Zone



Going slow

E.g. sad, sick, tired,
bored

Green Zone



Good to go

E.g. happy, calm,
focused, ok

Yellow Zone



Caution

Starting to lose control

E.g. worried, excited,
annoyed

Red Zone



Stop!

Out of control

E.g. angry, terrified,
elated

Recap!

Factorise:

$$x^2 + 9x + 20$$

$$x^2 + 13x + 30$$

$$x^2 + 12x + 36$$

Factorising!

$$x^2 + 3x - 10$$

Add $\rightarrow +3$
Multiply $\rightarrow -10$

$$(x + 5)(x - 2)$$

*What two numbers
multiply to make -10?
Then, which add to
make +3*

~~+10, -1~~

~~+1, -10~~

+5, -2

~~+2, -5~~

$$x^2 + 2x - 15$$

$$\begin{aligned} + &= +2 \\ x &= -15 \end{aligned}$$

$$(x - 5)(x + 3)$$

$$x^2 - 4x - 21$$

$$\begin{aligned} + &= -4 \\ x &= -21 \end{aligned}$$

$$(x - 7)(x + 3)$$

$$x^2 - 2x - 24$$

$$\begin{aligned} + &= -2 \\ x &= -24 \end{aligned}$$

$$(x - 6)(x + 4)$$

$$x^2 - 2x - 35$$

$$x^2 + 2x - 24$$

$$x^2 + x - 12$$

$$x^2 + 9x - 10$$

$$x^2 - 4x - 32$$



My Learning

Traffic light your work today.

Thumbs down- I don't understand it

Thumbs across- I understand some of it

Thumbs up- I understand all of it

A further task will be on the website for you to complete later today – one merit for all who do

