

# Mathematical writing

Algebra skills:

## ① Transforming expressions

Ex.  $3(x+1)^2 = 3(x^2 + 2x + 1)$   
 $= 3x^2 + 6x + 3$

- makes a chain of equalities
- true for all choices of  $x$

• not true for all choices of  $x$  — challenge is to figure out which they're true for.

## ② Solving equations

Solve:

$$2x + 1 = 5x - 4$$

$$1 = 3x - 4$$

$$5 = 3x$$

$$\frac{5}{3} = x$$

- not a chain of equalities, but several different ones
- transforming equations, not expressions, by doing same thing to both sides