Year 8 Mathematics Learning Journey: Unit 9 - Brackets, Equations and Inequalities

Step 1: Form algebraic expressions

Write an expression for the perimeter and area of the shape.

Step 2: Use directed number with algebra

Find the value of x^2 when $x = -2.5$

Step 3: Multiply out a single bracket

Expand $2x(5 – x + y)$

Step 4: Factorise into a single bracket

How many ways can you factorise the expression $24xy + 36xz$

Step 5: Simplify multiple single brackets

Expand and simplify $3(4a – 2) – 2(6a – 3)$

Step 6 (H): Expand a pair of binomials

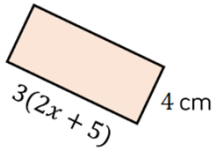
$(2x + 5)^2 = 4x + 25$
Comment on this.

Step 7: Solve equations with brackets

$6(e – 1) + 2e = 10$

Step 8: Form and solve equations with brackets

The area of the rectangle is $72cm^2$. Work out the value of x and hence find the perimeter of the rectangle.



Step 9: Simple inequalities

Solve $4x + 2 > -7$

Step 10: Form and solve inequalities

"Three more than double my number is greater than 10". What is the smallest integer I could be thinking of?

Step 11 (H): Unknowns on both sides

Solve $2x + 1 = 4x - 3$

Step 12 (H): Complex equations and inequalities

Verify, by substitution, the x = 3 in the equation.
$7x+3(2x+4) = 4(2x+4)-2(3x–8)$

Step 13: Identify algebraic constructs

What formulae do you use in your other subjects?

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