

National 5 Final Exam Practice

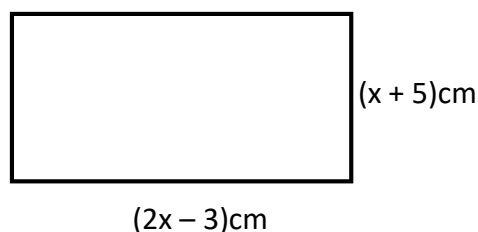
Algebraic Skills

Algebraic Expressions and Brackets

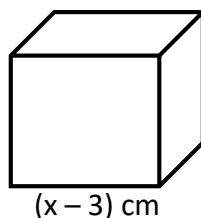
Average Score

3 marks

1. Expand and simplify $(x + 3)(x^2 - 4x + 6)$.
2. Simplify $4x^2 - 3x(5 - 2x)$
3. Multiply and simplify $(x + 5)(2x - 5)^2$.
4. Expand and simplify $(x + 4)^3$
5. Simplify $(2x - 1)(2x^2 + 3x - 6)$
6. Find an expression for the area of the rectangle below.



7. Expand and simplify $(2x - 3)(3 - 3x + x^2)$
8. Write down an expression for the volume of the cube shown below.



9. Expand and simplify $24 - (x + 6)(2x - 3)$.
- 10a. A rectangle has length $(x + 4)\text{cm}$ and breadth $(2x - 5)\text{cm}$. Write down an expression for its area.
- 10b. A second rectangle has a length $(x + 3)\text{cm}$ and breadth $(x - 6)\text{cm}$. Write down a second expression for the area of this rectangle.
- 10c. Show that the difference in their areas can be expressed as $x^2 + 6x - 2\text{ cm}^2$
11. Expand and simplify $(3x - 1)(x^2 - 3x + 4)$
12. Expand and simplify $(2x + 5)(x + 1)^2$
13. Expand and simplify $(3 - x)(2x^2 + x - 7)$