EXPANDING TRIPLE BRACKETS

Task 1 – Expand and fully simplify.

1) $x(x+2)(x+3)$

2) $x(x-4)(x+1)$

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

4) $x(x-3)(x-6)$

5) $x(x+7)(x-5)$

Task 2 – Expand and fully simplify.

6) $(x+1)(x+2)(x+3)$

7) $(x+4)(x+5)(x+6)$

8) $(x+2)(x+3)(x+1)$

9) $(x-2)(x+3)(x+5)$

10) $(x+6)(x-1)(x+2)$

11) $(x-3)(x-2)(x+4)$

12) $(x-5)(x-1)(x+3)$

13) $(x-4)(x+4)(x+1)$

14) $(x-6)(x-2)(x-1)$

15) $(x+7)(x-3)(x+2)$

Task 3 – Expand and fully simplify.

16) $(2x+1)(x+3)(x+2)$

17) $(x+1)(3x+2)(x+5)$

18) $(x+4)(x+2)(2x+3)$

19) $(2x-1)(x+3)(x-5)$

20) $(x-2)(x+4)(4x+1)$

21) $(3x+2)(x-1)(x+5)$

22) $(x-3)(2x+1)(x-2)$

23) $(2x-5)(x-1)(x+2)$

24) $(x-6)(x+2)(5x-3)$

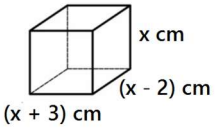
25) $(4x+1)(x-4)(x+3)$

Challenge

26) **Expand and fully simplify**

$$(ax+1)(x+b)(x+c)$$

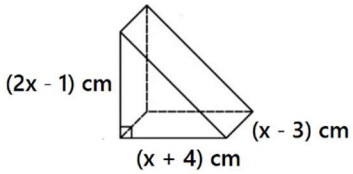
27) **The dimensions of a cuboid are shown below.**



Given that volume of the cuboid is 350 cm^3, show that

$$x^3 + x^2 - 6x - 350 = 0$$

28) **The dimensions of the base, height and length of a triangular prism are as pictured below.**



Given that the volume of the triangular prism is 931 cm^3, show that

$$2x^3 + x^2 - 25x - 1850 = 0$$