Expanding triple brackets

1

Expand and simplify $(x^2 + 2x + 1)(x + 3)$

×	x^2	$+2x$	$+1$
x	x^3	$2x^2$	x
$+3$			

Answer _____

2

Expand and simplify $(x^2 + 4x + 2)(x + 1)$

×	x^2	$+4x$	$+2$
x	x^3		
$+1$			

Answer _____

3

Expand and simplify $(x + 2)(x^2 + x + 3)$

×			

Answer _____

4

Expand and simplify $(x + 2)(x + 3)(x + 4)$

×	x	$+2$
x	x^2	$2x$
$+3$	$3x$	6

= $x^2 + 5x + 6$

×	x^2	$+5x$	$+6$
x			
$+4$			

Answer _____

5

Expand and simplify $(x + 1)(x + 1)(x + 5)$

×	x	$+1$
x		
$+1$		

= _____

×			

Answer _____

6

Expand and simplify $(x + 3)(x + 3)(x + 2)$

×		

= _____

×			

Answer _____

7 *Notice the change!*

Expand and simplify $(x + 2)(x + 4)(x - 1)$

×		

= _____

×			

Answer _____

8

Expand and simplify $(x - 1)(x - 3)(x + 2)$

×		

= _____

×			

Answer _____

Expanding triple brackets *further practice*

9

Expand and simplify

$(x + 2)(x + 1)(x + 7)$

Answer _____

10

Expand and simplify

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

Answer _____

11

Expand and simplify $(x + 1)^2(x + 4)$

Answer _____

12

A cuboid has edges of x cm, $(x + 2)$ cm and $(x + 5)$ cm. Find an expression for its volume. Expand and simplify.

Answer _____

13

Expand and simplify

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

Answer _____

14

Expand and simplify $(x + 3)^3$

Answer _____

15

$(x + 1)(x + 4)(x + k) = x^3 + 8x^2 + bx + c$.
Find the values of k, b and c.

Answer _____

16

Ria says $(x + 1)(x + 2)(x + 3) = x^3 + 6$.
Explain why she is wrong.

Answer _____