Name:

Level 2 Further Maths

Expanding 3 Brackets

Corbettmaths

Ensure you have: Pencil or pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Revision for this topic

www.corbettmaths.com/more/further-maths/

1. Expand and simplify fully $(x+1)(x+2)(x+3)$

.....

(3)

---

2. Expand and simplify fully $(x+7)(x+3)(x+5)$

.....

(3)

3. Expand and simplify fully $(y+1)(y-4)(y+2)$

.....

(3)

---

4. Expand and simplify fully $(x-6)(x-3)(x-2)$

.....

(3)

5. Expand and simplify fully $(2w + 1)(2w + 5)(w + 2)$

.....

(3)

---

6. Expand and simplify fully $(3x - 1)(2x - 5)(x + 1)$

.....

(3)

7. Expand and simplify fully $(3 - y)(4 - y)(2y + 3)$

.....

(3)

---

8. Expand and simplify fully $(x + 4)(x + 2)^2$

.....

(3)

9. Expand and simplify fully $(4y-1)^2(y-2)$

.....

(3)

---

10. Expand and simplify fully $(x+1)^3$

.....

(3)

11. Expand and simplify fully $(y+4)^3$

.....

(3)

---

12. Expand and simplify fully $(x-3)^3$

.....

(3)

13. Expand and simplify fully $(2m-5)^3$

.....

(3)

---

14. Expand and simplify fully $(10-x)^3$

.....

(3)

15. Given that $(x+3)(x-5)(x+a) \equiv x^3 + 4x^2 - 27x - 90$

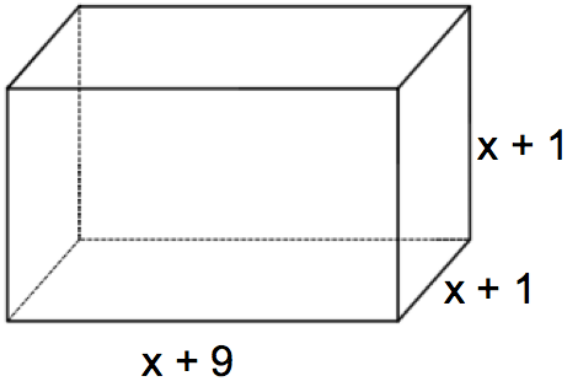
Find the value of *a*

.....

(2)

---

16. Shown below is a cuboid.



Form an expression for the volume of the cuboid.
Expand and simplify the expression.

.....

(4)

17. Given that $(x+3)(x+a)(x+7) \equiv x^3 + 15x^2 + 71x + 105$

Find the value of *a*

.....

(2)

---

18. Given that $(ax+1)(x-3)(x+b) \equiv 2x^3 - 3x^2 - 8x - 3$

Find the values of *a* and *b*

.....

(4)

19. Given that $(x + a)^2(x - 2) \equiv x^3 + bx^2 + 12x - 72$

Find the values of *a* and *b*

.....

(4)

20. Given that $(ax + b)(x + 4)(x + c) \equiv 2x^3 + 19x^2 + 49x + 20$

where *a*, *b* and *c* are integers.

Find the values of *a*, *b* and *c*

.....

(5)