

Expanding Brackets with Surds *fluency*



Expand and simplify

1 $\sqrt{3}(2 + \sqrt{3})$

2 $\sqrt{5}(\sqrt{5} - 1)$

3 $2(4 + \sqrt{7})$

4 $\sqrt{2}(\sqrt{8} + 3)$

5 $\sqrt{6}(\sqrt{2} + \sqrt{3})$

6 $3\sqrt{2}(\sqrt{2} - 5)$



Expand and simplify

7 $(1 + \sqrt{2})(3 + \sqrt{2})$

8 $(4 + \sqrt{3})(2 - \sqrt{3})$

9 $(\sqrt{5} + 2)(\sqrt{5} + 6)$

10 $(3 - \sqrt{7})(1 - \sqrt{7})$

11 $(2 + \sqrt{6})(5 + \sqrt{6})$

12 $(\sqrt{3} - 4)(\sqrt{3} + 1)$



Expand and simplify

13 $(3 + \sqrt{2})(3 - \sqrt{2})$

14 $(\sqrt{7} + 2)(\sqrt{7} - 2)$

15 $(5 - \sqrt{3})(5 + \sqrt{3})$

16 $(2\sqrt{5} + 1)(2\sqrt{5} - 1)$

17 $(\sqrt{6} + \sqrt{2})(\sqrt{6} - \sqrt{2})$

18 $(4 - 3\sqrt{2})(4 + 3\sqrt{2})$



Expand and simplify

19 $(1 + \sqrt{3})^2$

20 $(\sqrt{5} - 2)^2$

21 $(3 + \sqrt{6})^2$

22 $(2\sqrt{2} + 1)^2$

23 $(\sqrt{7} - \sqrt{3})^2$

24 $(4 - 2\sqrt{5})^2$



Expand and simplify

25 $(2 + 3\sqrt{2})(1 + \sqrt{2})$

26 $(3\sqrt{5} - 1)(\sqrt{5} + 4)$

27 $(\sqrt{2} + 1)(\sqrt{3} + 1)$

28 $(2\sqrt{3} + \sqrt{2})(\sqrt{3} - \sqrt{2})$

29 $(5 - 2\sqrt{3})(4 + 3\sqrt{3})$

30 $(1 + \sqrt{2})^3$