

Level 2 Factorising #1

Factorise:

1. $15x^2 + 38x + 24$

2. $8x^2 - 14x + 3$

3. $15x^2 + 26x - 21$

4. $20x^2 + 21x + 4$

5. $15x^2 + 37x + 20$

6. $20x^2 - 53x + 35$

7. $10x^2 - 23x + 12$

8. $28x^2 + 17x - 56$

9. $63x^2 - 42x - 56$

10. $16x^2 - 625$

11. $12x^4 + 31x^2 + 20$

12. $6 - 7x - 20x^2$

Simplify fully:

13. $\frac{25x^2 + 25x + 4}{25x^2 - 10x - 3}$

14. $\frac{15x^2 + 23x + 4}{12x^2 + 31x + 20}$

15. $\frac{6x - 5}{42x^2 + 55x - 75}$

16. $\frac{48x^2 - 48x + 9}{24x - 18}$

Level 2 Factorising #1 Answers

Factorise:

1. $15x^2 + 38x + 24$ $(3x + 4)(5x + 6)$
2. $8x^2 - 14x + 3$ $(4x - 1)(2x - 3)$
3. $15x^2 + 26x - 21$ $(5x - 3)(3x + 7)$
4. $20x^2 + 21x + 4$ $(5x + 4)(4x + 1)$
5. $15x^2 + 37x + 20$ $(3x + 5)(5x + 4)$
6. $20x^2 - 53x + 35$ $(5x - 7)(4x - 5)$
7. $10x^2 - 23x + 12$ $(5x - 4)(2x - 3)$
8. $28x^2 + 17x - 56$ $(4x + 7)(7x - 8)$
9. $63x^2 - 42x - 56$ $7(3x + 2)(3x - 4)$
10. $16x^2 - 625$ $(4x - 25)(4x + 25)$
11. $12x^4 + 31x^2 + 20$ $(3x^2 + 4)(4x^2 + 5)$
12. $6 - 7x - 20x^2$ $(3 - 4x)(2 + 5x)$ or $-(4x - 3)(5x + 2)$

Simplify fully:

13. $\frac{25x^2 + 25x + 4}{25x^2 - 10x - 3} = \frac{(5x + 4)(5x + 1)}{(5x - 3)(5x + 1)} = \frac{5x + 4}{5x - 3}$
14. $\frac{15x^2 + 23x + 4}{12x^2 + 31x + 20} = \frac{(3x + 4)(5x + 1)}{(3x + 4)(4x + 5)} = \frac{5x + 1}{4x + 5}$
15. $\frac{6x - 5}{42x^2 + 55x - 75} = \frac{6x - 5}{(7x + 15)(6x - 5)} = \frac{1}{7x + 15}$
16. $\frac{48x^2 - 48x + 9}{24x - 18} = \frac{3(4x - 3)(4x - 1)}{6(4x - 3)} = \frac{4x - 1}{2}$