

Level 2 Factorising #3

Factorise:

1. $4x^2 - 20x - 75$

2. $8x^2 - 58x - 15$

3. $18x^2 - 3x - 10$

4. $18x^2 + 19x - 12$

5. $15x^2 + 13x - 20$

6. $20x^2 - 47x + 24$

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

8. $56x^2 - 15x - 56$

9. $3a^2b^2 - 2ab - 8$

10. $165x^2 + 143x + 22$

11. $9 - 64x^2$

12. $8x^2 + 66x + 16$

Simplify fully:

13. $\frac{9x^2 + 9x + 2}{3x + 1}$

14. $\frac{4x^2 + 33x + 35}{12x^2 + 23x + 10}$

15. $\frac{4 - 5x}{10x^2 + 17x - 20}$

16. $\frac{36x^2 - 132x + 96}{x^2 - 1}$

Level 2 Factorising #3 Answers

Factorise:

1. $15x^2 - 11x - 56$ $(5x + 8)(3x - 7)$
2. $24x^2 - 47x - 21$ $(8x + 3)(3x - 7)$
3. $18x^2 - 3x - 10$ $(6x - 5)(3x + 2)$
4. $200x^2 - 85x + 2$ $(40x - 1)(5x - 2)$
5. $15x^2 + 44x + 21$ $(3x + 7)(5x + 3)$
6. $70x^2 - 127x + 24$ $(5x - 8)(14x - 3)$
7. $15x^2 - 35x + 10$ $5(3x - 1)(x - 2)$
8. $208 + 89x - 24x^2$ $(8x + 13)(16 - 3x)$ or $-(8x + 13)(3x - 16)$
9. $4x^2 - 64$ $4(x - 4)(x + 4)$
10. $18x^2 - 19xy - 12y^2$ $(9x + 4y)(2x - 3y)$
11. $56x^2 + 210x + 49$ $7(2x + 7)(4x + 1)$
12. $3x^6 - 2x^3 - 8$ $(3x^3 + 4)(x^3 - 2)$

Simplify fully:

13. $\frac{10x^2 + 31x + 24}{5x + 8} = \frac{(2x + 3)(5x + 8)}{5x + 8} = 2x + 3$
14. $\frac{3x^2 + 29x + 40}{3x^2 + 26x + 16} = \frac{(3x + 5)(x + 8)}{(3x + 2)(x + 8)} = \frac{3x + 5}{3x + 2}$
15. $\frac{2x - 1}{4x^2 - 1} = \frac{2x - 1}{(2x + 1)(2x - 1)} = \frac{1}{2x + 1}$
16. $\frac{50x^2 - 20x - 6}{50x + 10} = \frac{2(5x + 1)(5x - 3)}{10(5x + 1)} = \frac{5x - 3}{5}$