

Level 2 Factorising #2

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 #2 Answers

Factorise:

1. $4x^2 - 20x - 75$ $(2x + 5)(2x - 15)$

2. $8x^2 - 58x - 15$ $(4x + 1)(2x - 15)$

3. $18x^2 - 3x - 10$ $(6x - 5)(3x + 2)$

4. $18x^2 + 19x - 12$ $(9x - 4)(2x + 3)$

5. $15x^2 + 13x - 20$ $(3x + 5)(5x - 4)$

6. $20x^2 - 47x + 24$ $(5x - 8)(4x - 3)$

7. $10x^2 - 7x - 12$ $(5x + 4)(2x - 3)$

8. $56x^2 - 15x - 56$ $(8x + 7)(7x - 8)$

9. $3a^2b^2 - 2ab - 8$ $(3ab + 4)(ab - 2)$

10. $165x^2 + 143x + 22$ $11(3x + 2)(5x + 1)$

11. $9 - 64x^2$ $(3 - 8x)(3 + 8x)$ or $-(8x - 3)(8x + 3)$

12. $8x^2 + 66x + 16$ $2(4x + 1)(x + 8)$

Simplify fully:

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

14. $\frac{4x^2 + 33x + 35}{12x^2 + 23x + 10} = \frac{(4x + 5)(x + 7)}{(3x + 2)(4x + 5)} = \frac{x + 7}{3x + 2}$

15. $\frac{4 - 5x}{10x^2 + 17x - 20} = \frac{-(5x - 4)}{(2x + 5)(5x - 4)} = \frac{-1}{2x + 5}$

16. $\frac{36x^2 - 132x + 96}{x^2 - 1} = \frac{12(3x + 8)(x + 1)}{(x - 1)(x + 1)} = \frac{12(3x + 8)}{x - 1}$