

National 5 Homework

Algebraic Skills

Expressions and Factors

1. Factorise $2x^2 - 5x - 12$.
2. Fully factorise $3p^2 - 75$
3. Show clearly that $(x + 3)$ is a common factor of $2x^2 - 18$ and $3x^2 + 17x + 24$
4. Factorise $x^2 - 4x - 12$
5. Factorise $p^2 - 1$
6. Fully factorise $4a^4 - 16$
7. Factorise $4a^2 + 3a - 10$
8. Fully factorise $3p^3 - 48$
9. Fully factorise $5t^2 - 20$
10. The area of a rectangle is $3x^2 - 5x - 21$ cm². If its length is $(2x + 3)$ cm, find an expression for its breadth.
11. Fully factorise $6a^2 - 24$ and show there is a common factor with the expression $x^2 - 4x - 12$.
12. Factorise $4x^2 - 11x - 20$
13. Factorise $2x^2 + 3x - 20$
14. Fully factorise $9x^2 - 81$
15. Factorise $4x^2 - 8x - 45$
16. Fully factorise $3p^2 - 75$
17. Factorise $2a^2 - 13a + 18$
18. Show clearly that $(2x + 1)$ is a common factor of $4x^2 - 1$ and $4x^2 - 8x - 5$.
19. The area of a parallelogram is $4x^2 - 21x - 18$ cm². If its base is $(x - 6)$ cm, find an expression for its height.
20. Factorise $3x^2 + x - 24$