ILLAWARRA TUTORING

This worksheet helps students to recognise the pattern of the difference of two squares and to factorise expressions accordingly. You will practise identifying expressions in the form $a^2 - b^2$ and rewriting them as $(a-b)(a+b)$. Read each question carefully and check your work.

Easy Questions

1. Identify and factorise the expression $x^2 - 9$.
2. Factorise the expression $4 - y^2$.
3. Factorise $25 - a^2$.
4. Factorise $25a^2 - 16$.
5. Factorise $9x^2 - 4$.

Intermediate Questions

6. Factorise $49x^2 - 64$.
7. Factorise $36y^2 - 1$.
8. Factorise $9m^2 - 49n^2$.
9. Factorise $a^2 - 25$ and solve for a if $a^2 - 25 = 0$.
10. Factorise $16x^2 - 81y^2$.
11. Factorise $4x^2 - 9y^2$.
12. Factorise $25p^2 - 49q^2$.
13. Factorise $64a^2 - \frac{1}{9}$.
14. Factorise $\frac{9}{4}x^2 - \frac{1}{16}$.
15. Factorise $9x^2 - 49$.
16. Factorise $100x^2 - 49y^2$.
17. Factorise $144a^2 - 25b^2$.

18. Factorise $4x^2 - 64$.
19. Factorise $81z^2 - 16$.
20. Factorise $121x^2 - 49$.

Hard Questions

21. Factorise $(5x + 2)^2 - 9$.
22. Factorise $(4x - 3)^2 - (2x + 1)^2$.
23. Factorise $25x^4 - 16$.
24. Factorise $9x^2 - (2x - 3)^2$.
25. Factorise $(6x + 1)^2 - (2x - 5)^2$.
26. Factorise $49x^2 - (3x + 4)^2$.
27. Factorise $(x + 3)^2 - 4x^2$.
28. Factorise $(2a + 1)^2 - (3a - 2)^2$.
29. Factorise $(7z - 2)^2 - 9z^2$.
30. Factorise $9(x + 2)^2 - (3x - 4)^2$.