



MAth on the Fly!



NAME: _____ DATE: _____

Factoring Difference of Squares

Factor each expression below.

1. $4x^2 - 9$

2. $e^2 - 16$

3. $a^2 - n^2$

4. $25 - 81y^2$

5. $x^4 - 49$

6. $w^2 - 1$

7. $m^2 - p^4$

8. $100 - x^2$

9. $x^2 - 100$

10. $x^2 + 100$

11. $u^4 - 144$

12. $36 - b^4$

13. $9x^2 - 64y^2$

14. $1 - 25x^2$

SOLUTIONS

$$\begin{array}{l} \boxed{1.} \quad 4x^2 - 9 \\ (2x + 3)(2x - 3) \end{array}$$

$$\begin{array}{l} \boxed{2.} \quad e^2 - 16 \\ (e - 4)(e + 4) \end{array}$$

$$\begin{array}{l} \boxed{3.} \quad a^2 - n^2 \\ (a - n)(a + n) \end{array}$$

$$\begin{array}{l} \boxed{4.} \quad 25 - 81y^2 \\ (5 + 9y)(5 - 9y) \end{array}$$

$$\begin{array}{l} \boxed{5.} \quad x^4 - 49 \\ (x^2 + 7)(x^2 - 7) \end{array}$$

$$\begin{array}{l} \boxed{6.} \quad w^2 - 1 \\ (w - 1)(w + 1) \end{array}$$

$$\begin{array}{l} \boxed{7.} \quad m^2 - p^4 \\ (m - p^2)(m + p^2) \end{array}$$

$$\begin{array}{l} \boxed{8.} \quad 100 - x^2 \\ (10 + x)(10 - x) \end{array}$$

$$\begin{array}{l} \boxed{9.} \quad x^2 - 100 \\ (x + 10)(x - 10) \end{array}$$

$$\begin{array}{l} \boxed{10.} \quad x^2 + 100 \\ \text{Prime} \\ (\text{Can't be factored}) \end{array}$$

$$\begin{array}{l} \boxed{11.} \quad u^4 - 144 \\ (u^2 - 12)(u^2 + 12) \end{array}$$

$$\begin{array}{l} \boxed{12.} \quad 36 - b^4 \\ (6 + b^2)(6 - b^2) \end{array}$$

$$\begin{array}{l} \boxed{13.} \quad 9x^2 - 64y^2 \\ (3x + 8y)(3x - 8y) \end{array}$$

$$\begin{array}{l} \boxed{14.} \quad 1 - 25x^2 \\ (1 - 5x)(1 + 5x) \end{array}$$