

Basic Factoring Patterns
Side by Side

Name _____

Date _____

Key

Per _____

1. $x^2 - 100$

$(x + 10)(x - 10)$

9. $4x^2 - 1$

$(2x + 1)(2x - 1)$

17. $x^2 - 529$

$(x + 23)(x - 23)$

3. $x^2 + 2x - 15$

$(x + 5)(x - 3)$

11. $25x^2 - 36$

$(5x + 6)(5x - 6)$

19. $x^2 - 36$

$(x + 6)(x - 6)$

5. $9x^2 - 64$

$(3x + 8)(3x - 8)$

13. $9x^2 + 22x + 8$

$(9x + 4)(x + 2)$

21. $x^2 + 16x + 55$

$(x + 11)(x + 5)$

7. $x^2 - 169$

$(x + 13)(x - 13)$

15. $16x^2 + 30x + 9$

$(8x + 3)(2x + 3)$

23. $x^2 + 6x + 9$

$(x + 3)^2$

Patterns in Hiding

Name _____

Date _____

Per _____

Key

$$1. \frac{2x^2}{2} - \frac{8x}{2} - \frac{90}{2}$$

$$\begin{array}{r} 45 \\ -9 \times 5 \\ -4 \end{array}$$

$$2(x^2 - 4x - 45)$$

$$\boxed{2(x-9)(x+5)}$$

$$3. \frac{3x^2}{3} - \frac{12x}{3} + \frac{12}{3}$$

$$3(x^2 - 4x + 4)$$

$$\boxed{3(x-2)^2}$$

$$5. \frac{2x^2}{2} - \frac{32}{2}$$

$$2(x^2 - 16)$$

$$\boxed{2(x+4)(x-4)}$$

$$7. \frac{5x^2}{5} + \frac{45x}{5} + \frac{70}{5}$$

$$\begin{array}{r} 35 \\ 7 \times 5 \\ 9 \end{array}$$

$$5(x^2 + 9x + 35)$$

$$\boxed{5(x+7)(x+5)}$$

$$9. \frac{50x^2}{50} - \frac{200}{50}$$

$$50(x^2 - 4)$$

$$\boxed{50(x+2)(x-2)}$$

$$11. \frac{4x^2}{4} - \frac{24x}{4} + \frac{32}{4}$$

$$\begin{array}{r} 8 \\ -4 \times -2 \\ -6 \end{array}$$

$$4(x^2 - 6x + 8)$$

$$\boxed{4(x-4)(x-2)}$$