

7-7**Skills Practice****Special Products**Remember to Multiply
First Inner Outer Last

Example

$$\begin{array}{|c|c|c|c|} \hline & \text{Inner} & & \\ \hline \text{First} & & \text{Last} & \\ \hline \end{array} \begin{array}{l} (t+2)(t-1) \\ \text{First} \\ \text{Outer} \end{array}$$

$$= t^2 - 2t - t - 2$$

$$= t^2 - 3t - 2$$

Find each product.

1. $(n+3)^2$ $(n+3)(n+3)$

$$n^2 + 6n + 9 \quad \text{OR} \quad n^2 + 3n + 6$$

2. $(x+4)(x+4)$

$$x^2 + 8x + 16 \quad \text{OR} \quad x^2 + 4x + 8$$

3. $(y-7)^2$ $(y-7)(y-7)$

$$y^2 + 14y + 49 \quad \text{OR} \quad y^2 - 14y + 49$$

4. $(t-3)(t-3)$

$$t^2 - 3t + 9 \quad \text{OR} \quad t^2 - 6t + 9$$

5. $(b+1)(b-1)$

$$b^2 + 2b - 1 \quad \text{OR} \quad b^2 - 1$$

6. $(a-5)(a+5)$

$$a^2 - 25 \quad \text{OR} \quad a^2 - 10a - 25$$

7. $(p-4)^2$ $(p-4)(p-4)$

$$p^2 - 4p + 16 \quad \text{OR} \quad p^2 - 8p + 16$$

8. $(z+3)(z-3)$

$$z^2 - 6z - 9 \quad \text{OR} \quad z^2 - 9$$

9. $(l+2)(l+2)$

$$l^2 + 4l + 4 \quad \text{OR} \quad l^2 + l + 2$$

10. $(r-1)(r-1)$

$$r^2 - 2r - 1 \quad \text{OR} \quad r^2 - 1$$

11. $(3g+2)(3g-2)$

$$9g^2 - 4 \quad \text{OR} \quad 6g^2 - 6g - 4$$

12. $(2m-3)(2m+3)$

$$4m^2 - 9 \quad \text{OR} \quad 4m^2 - 10m - 9$$

13. $(6+u)^2$ $(6+u)(6+u)$

$$12 + 3u + u^2 \quad \text{OR} \quad u^2 + 12u + 36$$

14. $(r+s)^2$ $(r+s)(r+s)$

$$r^2 + s^2 \quad \text{OR} \quad r^2 + 2sr + s^2$$

15. $(3q+1)(3q-1)$

$$6q - 1 \quad \text{OR} \quad 9q^2 - 1$$

16. $(c-e)^2$ $(c-e)(c-e)$

$$c^2 - e^2 \quad \text{OR} \quad c^2 - 2ec + e^2$$

17. $(2k-2)^2$ $(2k-2)(2k-2)$

$$4k^2 - 8k + 4 \quad \text{OR} \quad 4k^2 + 4$$

18. $(w+3h)^2$ $(w+3h)(w+3h)$

$$w^2 + 6wh + 9h^2 \quad \text{OR} \quad w^2 + 3wh + 6h^2$$

19. $(3p-4)(3p+4)$

$$9p^2 - 16 \quad \text{OR} \quad 6p^2 - 16$$

20. $(t+2u)^2$

$$t^2 + 4u^2 \quad \text{OR} \quad t^2 - 4tu + 4u^2$$

21. $(x-4y)^2$ $(x-4y)(x-4y)$

$$x^2 - 4xy - 8y^2 \quad \text{OR} \quad x^2 - 8xy + 16y^2$$

22. $(3b+7)(3b-7)$

$$9b^2 - 49 \quad \text{OR} \quad 9b^2 - 42b - 49$$

23. $(3y-3g)(3y+3g)$

$$9y^2 - 9g^2 \quad \text{OR} \quad 6y^2 - 6g^2$$

24. $(s^2+r^2)^2$

$$s^4 + 2s^2r^2 + r^4 \quad \text{OR} \quad s^4 + r^4$$

25. $(2k+m^2)^2$ $(2k+m^2)(2k+m^2)$

$$2k^2 + 2km^2 + m^4 \quad \text{OR} \quad 4k^2 + 4km^2 + m^4$$

26. $(3u^2-n)^2$

$$9u^4 - 6u^2n + n^2 \quad \text{OR} \quad 9u^4 + n$$

27. **GEOMETRY** The length of a rectangle is the sum of two whole numbers. The width of the rectangle is the difference of the same two whole numbers. Using these facts, write a verbal expression for the area of the rectangle.

$$x^2 - y^2$$

$$\text{OR} \quad x^2 - xy - y^2$$

$$l = \frac{x}{2} + \frac{y}{2}$$

$$w = \frac{x}{2} - \frac{y}{2}$$

$$A = (x+y)(x-y)$$