

Name: _____

Date: _____

$(x + n)^2 = x^2 + 2nx + n^2$. The middle is *TWICE* n ; the end is n *SQUARED*. Last two are challenge problems!

1. Expand $(x + 3)^2$.

show your work

2. Expand $(x - 5)^2$.

show your work

3. Is $x^2 + 8x + 16$ a perfect square?
Write it as $(\)^2$.

show your work

4. Is $x^2 + 10x + 25$ a perfect square?

show your work

5. Fill the blank: $x^2 + 12x + \underline{\hspace{1cm}}$ is a perfect square.

show your work

6. Fill the blank: $x^2 - 6x + \underline{\hspace{1cm}}$.

show your work

7. Is $x^2 + 7x + 12$ a perfect square? Why or why not?

show your work

8. Write $(2x + 3)^2$ as a trinomial.

show your work

9. What number completes $x^2 - 14x + \underline{\hspace{1cm}}$, and what is the factored square? ★ CHALLENGE

show your work

10. $x^2 + bx + 81$ is a perfect square. ★ CHALLENGE
Find the two possible values of b .

show your work