

## Unit 4.1 Completing the square Practice

Period \_\_\_\_\_

**Find the value that completes the square and then rewrite as a perfect square.**

1)  $x^2 + 28x + \underline{\hspace{1cm}}$

196;  $(x + 14)^2$

2)  $x^2 - 24x + \underline{\hspace{1cm}}$

144;  $(x - 12)^2$

3)  $x^2 - 26x + \underline{\hspace{1cm}}$

169;  $(x - 13)^2$

4)  $x^2 + 30x + \underline{\hspace{1cm}}$

225;  $(x + 15)^2$

5)  $n^2 - 28n + \underline{\hspace{1cm}}$

196;  $(n - 14)^2$

6)  $a^2 + 42a + \underline{\hspace{1cm}}$

441;  $(a + 21)^2$

7)  $n^2 - 4n + \underline{\hspace{1cm}}$

4;  $(n - 2)^2$

8)  $y^2 - 42y + \underline{\hspace{1cm}}$

441;  $(y - 21)^2$

9)  $x^2 + 26x + \underline{\hspace{1cm}}$

169;  $(x + 13)^2$

10)  $a^2 - 40a + \underline{\hspace{1cm}}$

400;  $(a - 20)^2$

11)  $n^2 + 19n + \underline{\hspace{1cm}}$

$$\frac{361}{4}; \left(n + \frac{19}{2}\right)^2$$

12)  $x^2 + 7x + \underline{\hspace{1cm}}$

$$\frac{49}{4}; \left(x + \frac{7}{2}\right)^2$$

13)  $x^2 - \frac{19}{14}x + \underline{\hspace{1cm}}$

$$\frac{361}{784}; \left(x - \frac{19}{28}\right)^2$$

14)  $p^2 + \frac{40}{21}p + \underline{\hspace{1cm}}$

$$\frac{400}{441}; \left(p + \frac{20}{21}\right)^2$$

15)  $a^2 - 17a + \underline{\hspace{1cm}}$

$$\frac{289}{4}; \left(a - \frac{17}{2}\right)^2$$

16)  $x^2 - 19x + \underline{\hspace{1cm}}$

$$\frac{361}{4}; \left(x - \frac{19}{2}\right)^2$$

17)  $r^2 + 13r + \underline{\hspace{1cm}}$

$$\frac{169}{4}; \left(r + \frac{13}{2}\right)^2$$

18)  $x^2 - x + \underline{\hspace{1cm}}$

$$\frac{1}{4}; \left(x - \frac{1}{2}\right)^2$$

19)  $m^2 - 9m + \underline{\hspace{1cm}}$

$$\frac{81}{4}; \left(m - \frac{9}{2}\right)^2$$

20)  $z^2 + 5z + \underline{\hspace{1cm}}$

$$\frac{25}{4}; \left(z + \frac{5}{2}\right)^2$$