Name_____

12-05-17A-T8 Completing the square

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

1) $m^2 + 6m + \_\_$

2) $x^2 + 24x + \_\_$

3) $r^2 + 2r + \_\_$

4) $z^2 - 8z + \_\_$

5) $p^2 - 12p + \_\_$

6) $x^2 - 14x + \_\_$

7) $x^2 - 22x + \_\_$

8) $n^2 - 24n + \_\_$

9) $n^2 - \frac{3}{4}n + \_\_$

10) $x^2 + 3x + \_\_$

11) $y^2 - 7y + \_\_$

12) $x^2 + 5x + \_\_$

13) $r^2 - r + \_\_$

14) $x^2 + 11x + \_\_$

15) $x^2 - 9x + \_\_$

16) $x^2 + 9x + \_\_$

Answers to 12-05-17A-T8 Completing the square

1) 9; $(m+3)^2$

3) 1; $(r+1)^2$

5) 36; $(p-6)^2$

7) 121; $(x-11)^2$

9) $\frac{9}{64}$; $\left(n-\frac{3}{8}\right)^2$

11) $\frac{49}{4}$; $\left(y-\frac{7}{2}\right)^2$

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

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