

## Completing the Square

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

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

2)  $x^2 + 15x + \underline{\hspace{1cm}}$

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

4)  $x^2 - 8x + \underline{\hspace{1cm}}$

5)  $y^2 + 30y + \underline{\hspace{1cm}}$

6)  $p^2 + \frac{33}{7}p + \underline{\hspace{1cm}}$

7)  $z^2 - \frac{13}{9}z + \underline{\hspace{1cm}}$

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

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

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

Solve each equation by completing the square.

11)  $m^2 + 36 = 20m$

12)  $p^2 - 59 = -10p$

13)  $r^2 + 12r = 61$

14)  $x^2 = 11 + 10x$

15)  $r^2 = 9 - 16r$

16)  $r^2 = 18r + 40$

17)  $p^2 - 94 = 6p$