

12.7.D3 ~ Completing the Square

Past due on _____ Period _____

Find the value that completes the square and then write in factored form.

1) $a^2 - 12a + \underline{\quad}$

2) $p^2 + 14p + \underline{\quad}$

3) $x^2 + 4x + \underline{\quad}$

4) $r^2 - 30r + \underline{\quad}$

Determine the roots of each quadratic equation by completing the square. Round your answer to the nearest hundredth. (If necessary, refer to the 12.7 example "Determining the Roots of a Quadratic Equation by the Completing the Square" in the Chapter 12 Summary.)

5) $x^2 + 8x + 3 = 0$

6) $k^2 - 4k - 26 = 0$

7) $b^2 - 10b + 15 = 0$

8) $n^2 - 12n + 25 = 0$

FIRST SEMESTER SPIRAL REVIEW

If necessary, refer to your 1st Semester Summary sheet.

Identify the x -intercept and y -intercept of the linear function whose equation is given.

9) $10x + 7y = -56$

10) $5x - 2y = -12$

Solve each inequality.

11) $m + 6 \leq -16 + 3m$

12) $4p + 4 \geq 3 - 2p - 11$

Solve each compound inequality.

13) $-76 \leq 6x + 8 \leq 80$

14) $3 - 12a < 39$ or $2a - 14 < -38$

Solve the system of equations via the substitution method.

15) $y = 2x + 4$
 $11x - 10y = 5$