

Completing the Square Homework

Solve the following by completing the square:

1. $b^2 + 2b = -20$

2. $x^2 - 10x + 26 = 8$

3. $x^2 + 6x + 8 = 0$

4. $k^2 - 4k + 1 = -5$

5. $5k^2 = 60 - 20k$

6. $6x^2 - 48 = -12x$

Use completing the square to put the following equations into vertex form:

7. $v^2 + 6v - 59 = y$

8. $r^2 - 4r - 91 = 7 + y$

9. $8x^2 + 16x = y + 42$

Answers: 1) $-1 \mp \sqrt{-19}$ 2) $5 \mp \sqrt{7}$ 3) $\{-2, -4\}$ 4) $2 \mp \sqrt{-2}$ 5) $\{2, -6\}$ 6) $\{2, -4\}$

7) $y = (v + 3)^2 - 68$ 8) $y = (r - 2)^2 - 102$ 9) $y = 8(x + 1)^2 - 50$