

**Algebra**

A124-Completing the Square



Questions #1-6: Find the vertex by completing the square.

Questions #7-10: Solve the equations by completing the square.

|   |   |
|---|---|
| <b>1.</b> $y = x^2 + 4x + 10$<br>A) (3, 7)      C) (-1, 8)<br>B) (-2, 6)      D) (2, 9)             | <b>2.</b> $y = x^2 + 7x - 5$<br>A) (-1, -7)      C) (-3.5, -17.25)<br>B) (-4, -15)      D) (-2.25, -19) |
| <b>3.</b> $y = x^2 - x + 4$<br>A) (0.5, 3.75)      C) (0.25, 2.25)<br>B) (0.75, 5.5)      D) (1, 5) | <b>4.</b> $y = 3x^2 + 9x + 6$<br>A) (3, 6)      C) (-1.5, -0.75)<br>B) (2, -3)      D) (-2, 4)          |
| <b>5.</b> $y = -2x^2 - 8x + 4$<br>A) (-4, 8)      C) (3, 7)<br>B) (5.25, 7.75)      D) (-2, 12)     | <b>6.</b> $y = 2x^2 - 12x + 6$<br>A) (3, -12)      C) (2, -7)<br>B) (-1, 9)      D) (4, 8)              |
| <b>7.</b> $x^2 + 8x + 12 = 0$<br>A) {-6, -2}      C) {6, 2}<br>B) {3, 4}      D) {-4, -3}           | <b>8.</b> $x^2 + 12x + 20 = 0$<br>A) {5, 4}      C) {-5, -4}<br>B) {-2, -10}      D) {10, 2}            |
| <b>9.</b> $4x^2 + 16x = 65$<br>A) {-3, 10}      C) {3, -10}<br>B) {-2, -9}      D) {2 ½, -6 ½}      | <b>10.</b> $3x^2 + 20x + 36 = 4$<br>A) {-2 ²/₃, -4}      C) {4, 4}<br>B) {-4, -3}      D) {5, -3}       |