Algebra 2 Name_____

Vertex Form and Quadratic Formula

Re-write each equation in vertex form. Identify the vertex.

1) $y = x^2 - 16x - 23$

2) $y = x^2 + 8x - 39$

3) $y = x^2 + 12x + 21$

4) $y = x^2 - 10x - 14$

5) $y = x^2 + 4x - 4$

6) $y = x^2 - 8x + 5$

7) $y = 4x^2 - 16x - 23$

8) $y = 5x^2 + 10x - 13$

Solve each equation with the quadratic formula.

9) $2x^2 + 6x - 108 = 0$

10) $2v^2 - 11v - 13 = 0$

11) $6m^2 - 10m - 24 = 0$

12) $5n^2 + 11n - 36 = 0$

13) $3x^2 + 2x - 6 = 4$

14) $4b^2 - 7b + 4 = 5$

15) $3k^2 + 11k - 134 = 10$

16) $2n^2 - 11n - 93 = 12$

17) $n^2 - 5n = 9$

18) $12v^2 + 6v + 6 = -2$

19) $n^2 + 18 = 9$

20) $p^2 + 10p + 12 = -4$