E Michaelmas Quadratic Sketching 2

Understanding quadratics fully is essential for GCSE and C1 and beyond. Sketch the following quadratic curves, labelling the coordinates of the turning points and where the curve crosses both the x and y-axes.

1. $y = (x - 3)(x + 4)$.
2. $y = (x + 1)^2 - 4$.
3. $y = x^2 + 3x - 4$.
4. $y = (2x - 1)(x + 5)$.
5. $y + 9 = x^2$.
6. $y = -x^2 - x + 6$.
7. $y = 2x^2 - 8x + 8$.
8. $y + x^2 = 2x + 35$.
9. $y = (-x + 3)^2 - 16$.
10. $y = (2 - x)^2 + 2$.
11. $y = -x^2 + 2x + 8$.
12. $y = x^2 - 6x + 5$.
13. $y = x^2 + 5x + 5$.
14. $y = 2x^2 - 10x - 3$.
15. $y = 5x^2 + 15x - 4$.
16. $y = x^2 - 6x + 11$.
17. $y = -3x^2 - 12x + 15$.
18. $y = -x^2 + 3x - 5$.