PLOTTING QUADRATICS

Answer all of these questions. Remember to show your working out in all questions.

MAIN QUESTIONS

1. $x^2 - 9 = 0$
2. $x^2 - 5x + 6 = 0$
3. $x^2 + 7x + 12 = 0$
4. $2x^2 - 5x - 3 = 0$
5. $x^2 - 10x + 25 = 0$
6. $3x^2 - 10x + 3 = 0$
7. $x^2 + 4x + 5 = 0$
8. $4x^2 - 12x + 9 = 0$
9. $x^2 - 3x - 10 = 0$
10. $2x^2 + 5x - 12 = 0$
11. x^2
12. $x^2 - 4$
13. $x^2 + 6x$
14. $x^2 - 2x + 1$
15. $x^2 + 4x - 5$
16. $2x^2 - 4x + 1$
17. $-x^2 + 4x$
18. $3x^2 + 6x - 2$
19. $x^2 - 8x + 15$
20. $-2x^2 + 12x - 18$
21. $x^2 + 2x + 1$
22. $x^2 - 6x + 9$
23. $x^2 + 8x$
24. $x^2 - 4x + 3$
25. $2x^2 + 8x + 6$

MASTER QUESTIONS

M1. A ball thrown upwards follows $h = 24t - 5t^2$. Find maximum height in metres.

M2. A rectangular field has area $80m^2$ with length 2m longer than width. Find dimensions.

M3. For $y = x^2 - 8x + 15$, state vertex coordinates and minimum/ maximum.

M4. Two positive numbers sum to 13 with product 36. Find the numbers.

M5. Profit is $P = -x^2 + 14x - 24$ (P in £1000s, x in 100s units). Find units to maximise profit.