PLOTTING QUADRATICS

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

MAIN QUESTIONS

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

MASTER QUESTIONS

M1. The product of two consecutive integers is 72. Find the integers.

M2. A rectangle has area 48 cm^2 with length 2 cm greater than width. Find its dimensions.

M3. A projectile's height h metres at t seconds is $h = 30t - 5t^2$. Find maximum height.

M4. The sum of squares of two consecutive even integers is 100. Find the integers.

M5. A right-angled triangle has hypotenuse 15 cm and one leg 3 cm longer than the other. Find both legs.