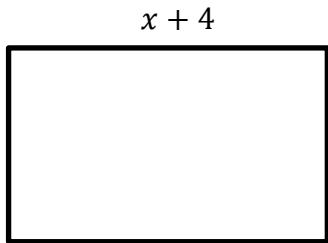


1. Solve the equation $y^2 + 5y = 0$ (3)
2. Factorise and solve the equation $z^2 - 8z + 15 = 0$ (3)
3. (i) Factorise $x^2 - 13x + 36$ (2)
- (ii) Hence, or otherwise, solve the equation $x^2 - 13x + 36 = 0$ (1)
4. Solve the equation $2x^2 - 6x - 1 = 0$
Give your answers to two decimal places.
You **must** show your working. (3)
5. (a) Find the values of a and b such that
$$x^2 + 6x - 3 = (x + a)^2 + b$$
 (2)
- (b) Hence, or otherwise, solve the equation $x^2 + 6x - 3 = 0$
giving your answers in surd form. (3)
6. The area of the rectangle shown in the diagram is 21cm^2 .
- (a) Show that $2x^2 + 5x - 33 = 0$


- (2)
- (b) Solve the equation $2x^2 + 5x - 33 = 0$ and hence find the length and width of the rectangle. (3)