(a)　(i)　Express $x^2 - 6x - 81$ in the form $(x-p)^2 + q$.　　　**2**

　　(ii)　Hence state the equation of the axis of symmetry of the graph of $y = x^2 - 6x - 81$.　　　**1**

(b)　The roots of the equation $x^2 - 6x - 81 = 0$ can be expressed in the form $x = d \pm d\sqrt{e}$.

　　Find, algebraically, the values of d and e.　　　**4**

Answer:

(a)　(i)　$(x - 3)^2 - 90$

　　(ii)　$x = 3$

(b)　　$d = 3, e = 10$