4 The positive integers x, y and z are the first, second and third terms, respectively, of an arithmetic progression with common difference -4.

Also, x, $\frac{15}{y}$ and z are the first, second and third terms, respectively, of a geometric progression.

(a) Show that y satisfies the equation $y^4 - 16y^2 - 225 = 0$. **[4]**

(b) Hence determine the sum to infinity of the geometric progression. **[4]**