8 **(a)** Find the first **three** terms in the expansion of $(4+3x)^{\frac{3}{2}}$ in ascending powers of x. [4]

(b) State the range of values of x for which the expansion in part **(a)** is valid. [1]

(c) In the expansion of $(4+3x)^{\frac{3}{2}}(1+ax)^2$ the coefficient of x^2 is $\frac{107}{16}$.

Determine the possible values of the constant a. [4]