

- 8 (a) Find the first **three** terms in the expansion of $(2+x)^{-3}$ in ascending powers of x . [4]
- (b) Hence find the first **three** terms in the expansion of $\frac{\sqrt{1+4x}}{(2+x)^3}$ in ascending powers of x . [4]
- (c) Determine the range of values of x for which the expansion in part (b) is valid, giving a reason for your answer. [2]