4 **(a)** Find the first three non-zero terms in the expansion of $\left(2-\frac{x^2}{4}\right)^6$ in ascending powers of x. Simplify each term. [3]

(b) Hence find the term independent of x in the expansion of $\left(2-\frac{x^2}{4}\right)^6\left(3-\frac{1}{x^2}\right)^2$. [3]

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