3 **(a)** Give the complete expansion of $\left(x + \frac{2}{x}\right)^5$. [2]

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(b) In the expansion of $(a + bx^2)\left(x + \frac{2}{x}\right)^5$, the coefficient of x is zero and the coefficient of $\frac{1}{x}$ is 80.

Find the values of the constants a and b. [4]

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