

The random variable  $X$  takes the values  $-2, 1, 2, 3$ . It is given that  $P(X = x) = kx^2$ , where  $k$  is a constant.

- (a) Draw up the probability distribution table for  $X$ , giving the probabilities as numerical fractions. [3]

[illegible]

- (b)** Find  $E(X)$  and  $\text{Var}(X)$ . [3]

This image shows a full page of white paper with ten horizontal dashed lines, typical of primary school handwriting practice paper. The lines are evenly spaced and extend across the entire width of the page. There is no text or other markings on the paper.