8 A team of volunteers donates cakes for sale at a charity stall. The number of cakes that can be sold depends on the price. A model for this is $y = 190 - 70x$, where y cakes can be sold when the price of a cake is £x.

(a) Find how many cakes could be given away for free according to this model. **[1]**

The number of volunteers who are willing to donate cakes goes up as the price goes up. If the cakes sell for £1.20 they will donate 50 cakes, but if they sell for £2.40 they will donate 140 cakes. They use the linear model $y = mx + c$ to relate the number of cakes donated, y, to the price of a cake, £x.

(b) Find the values of the constants m and c for which this linear model fits the two data points. **[2]**

(c) Explain why the model is **not** suitable for very low prices. **[1]**

(d) The team would like to sell all the cakes that they donate.

Find the set of possible prices that the cakes could have to achieve this. **[3]**