

(7 marks)

When stored in the refrigerator, eggs have a shelf life that is normally distributed, with a mean of 24.5 days and a standard deviation of 2.8 days.

(a) Let E be the distribution of the shelf life of a randomly selected egg and B be the distribution of the shelf life of a randomly selected loaf of bread. The distribution of E is shown below.

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- (c) Ten per cent of eggs have a shelf life of k days or greater.

Find k .

(1 mark)

- (d) A person is considering consuming a 36-day-old egg and some 5-day-old bread.

Assume that the egg and the bread have been stored appropriately and have been randomly selected.

Which *one* of these two products is more likely to be unfit for consumption? Support your answer with calculations.

(3 marks)