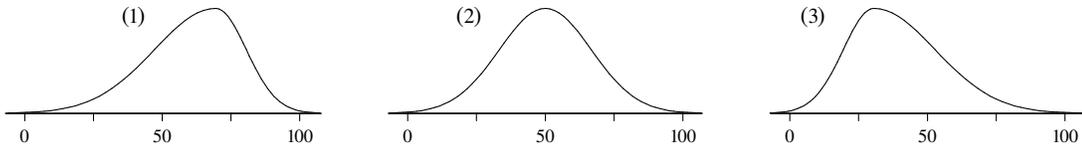4. Below are sketches of the histograms for three data sets.

    (a) In scrambled order, the averages are: 40, 50, 60; **match** the histograms with the averages.

    (b) The standard deviation of histogram (3) is closest to: 5, 15, 50?   Choose **one** option and explain briefly.

MARKS

3

(1, 1, 1)

    (c) The standard deviation of histogram (1) is *a lot* smaller than that of histogram (3): **True** or **False**? Explain briefly.

5. Both the following small data sets have the same average of 50. Which one has the *smaller* standard deviation and why?
   Explain on the basis of an examination of the data **without computation**.

MARKS

2

   (1) 50, 40, 60, 30, 70, 25, 75;

   (2) 50, 40, 60, 30, 70, 25, 75, 50, 50, 50.

Data set

6. For about 700 students in the course Statistics 2 at the University of California, Berkeley, in the Fall of 1975, the average
   number of university mathematics courses taken (other than Statistics 2) was about 1.1, with a standard deviation of about
   1.5. Would the *distribution* of the number of mathematics courses (other than Statistics 2) taken by these students look
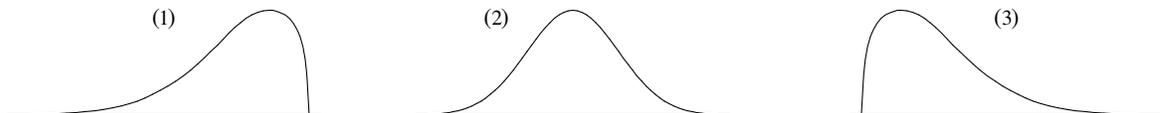   more like (1) or (2) or (3)? Explain your reasoning briefly.

MARKS

2

Diagram number