UNIVERSITY OF CALIFORNIA, SANTA BARBARA
Department of Physics

Physics 115A — Winter 1997
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Probability Question

230 students take an exam. The distribution of grades (out of 100 points) is as shown below.

Grade range	Center of range	Number of students
0–10	5	5
10–20	15	10
20–30	25	15
30–40	35	25
40–50	45	40
50–60	55	45
60–70	65	40
70–80	75	25
80–90	85	15
90–100	95	10
		Total 230

(1) If you pick a student at random, what is the probability that he/she received a grade between 80 and 90?

(2) Make a plot of $P(G)$, where G is the grade and $P(G)$ is the probability. You could make your plot as a histogram with one point for each bin (grade range).

(3) What is the average grade for the class?

(4) What is the standard deviation of the grade distribution?