

Warm-up Problems - April , 2006

NO WARMUP PROBLEMS TODAY

Lecture Problems

1. Compute the mean, variance, standard deviation and median for the pdfs:

(a)

$$f_1(x) = \begin{cases} \frac{1}{4} & \text{if } 0 \leq x \leq 4 \\ 0 & \text{otherwise} \end{cases}$$

(b)

$$f_2(x) = \begin{cases} \frac{1}{8}x & \text{if } 0 \leq x \leq 4 \\ 0 & \text{otherwise} \end{cases}$$

(c)

$$f_3(x) = \begin{cases} \frac{1}{64} & \text{if } 0 \leq x \leq 4 \\ 0 & \text{otherwise} \end{cases}$$

2. The amount of milk a dairy sells, in thousands of gallons, is a continuous random variable X with pdf

$$f(x) = \begin{cases} 4(x-1)^3 & \text{if } 1 \leq x \leq 2 \\ 0 & \text{otherwise} \end{cases}$$

- (a) Find the mean, and median of this pdf.

- (b) Find the quartiles.