

2. A continuous random variable Y has the probability density function given at the right.

$$f(y) = \begin{cases} ky^{-3} & ; y \geq 1, \\ 0 & ; \text{otherwise.} \end{cases}$$

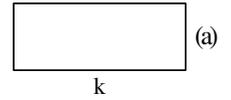
MARKS

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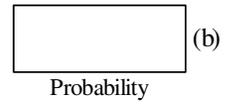
(3, 2, 2, 2)

- (a) Evaluate the constant k and sketch the p.d.f. of Y .
- (b) Evaluate: $\Pr(2 < Y \leq 4)$.
- (c) Find the mean of Y .
- (d) Find the median of Y .

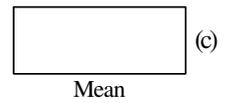
(a)



(b)



(c)



(d)

