

MARKS

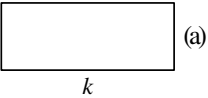
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(3, 2, 2)

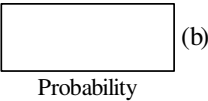
2. A continuous random variable  $Y$  has the probability density function given at the right.
- (a) Evaluate the constant  $k$  and sketch the p.d.f. of  $Y$ .
  - (b) Evaluate:  $\Pr(2 < Y \leq 4)$ .
  - (c) Find the median of  $Y$ .

$$f(y) = \begin{cases} ky^{-2} & ; \quad y \geq 1, \\ 0 & ; \quad \text{otherwise.} \end{cases}$$

(a)



(b)



(c)

