

pdf for *Problem B*:

$$f(x|\theta) = \frac{x}{\theta^2} e^{-x/\theta} I_{(0, \infty)}(x),$$

where  $\theta \in \Theta = (0, \infty)$ .

pdf for *Problem E*:

$$f(x|\theta) = \theta x^{\theta-1} I_{(0, 1)}(x),$$

where  $\theta \in \Theta = (0, \infty)$ .

pdf for *Problem F*:

$$f(x|\theta) = 4\theta x^3 e^{-\theta x^4} I_{(0, \infty)}(x),$$

where  $\theta \in \Theta = (0, \infty)$ .