

B07 > 9036 ~~大~~ 品質的

(1)

$$(a) \frac{1}{\sqrt{\pi}} e^{-\frac{1}{2}q^2}$$

$$(e) E(Q) = 1$$

$$(f) \text{std}[Q] = \sqrt{2}$$

$$(b) 0.68 = 7$$

$$(g) 0.68 = 7$$

$$(c) 1.96$$

$$(d) f_Q(q) = \begin{cases} \frac{1}{\sqrt{2\pi}} e^{-\frac{q^2}{2}}, & q > 0 \\ 0, & q \leq 0 \end{cases}$$

(2)

$$(a) f_T(t) = \begin{cases} e^{-t}, & t > 0 \quad (\alpha=1, \beta=1) \\ 0, & t \leq 0 \end{cases}$$

$$(f) E[T_3] = \alpha \beta = 3 \cdot 1 = 3$$

$$(b) E[T] = \beta = 1$$

$$(g) \text{std}[T_3] = \sqrt{3}$$

$$(h) 0.3679$$

$$(l) \alpha = 3, \beta = 1$$

$$f_{T_3}(t) = \begin{cases} \frac{1}{2}t^2 e^{-t}, & t > 0 \\ 0, & t \leq 0 \end{cases}$$

$$(h) 0.4 = 3 =$$