have $f'' \mid f = x,\ f' = 0$

$$\sim N\left(-\frac{x\Lambda}{\sigma^2},\ \Omega - \frac{\Lambda^2}{\sigma^2} - \Delta^2/\Lambda\right)$$

↳ ~~other~~ $\mathbb{E}[-f''\, I[f''<0] \mid \underbrace{f(t)=x,\ f'(t)=0]}_{\text{hopefully } \exists \text{ an explicit form!}}$

In general, $X \sim N(\mu, \sigma^2)$

Then ~~$\mathbb{P}[\dots$~~ $\mathbb{E}[X\, I[X \leq 0]]$

$$\propto \int_{-\infty}^{0} x e^{-(x-\mu)^2/2\sigma^2} = \int_{-\infty}^{0} (x-\mu) e^{-(x-\mu)^2/2\sigma^2} + \mu \int_{-\infty}^{0} e^{-(x-\mu)^2/2\sigma^2}$$

$= \cancel{\left[e^{-(x-\mu)^2/2\sigma^2} \right]}$

$$= \left[e^{-(x-\mu)^2/2\sigma^2} \times -\sigma^2 \right]_{-\infty}^{0} + \mu \int_{-\infty}^{0} e^{-(x-\mu)^2/2\sigma^2}\, dx.$$

$f(x; \mu, t) \rightarrow x \in M$

↳ ?!! unpleasant ↳ o ????!