Brownian Information

13. Compute $\mathbb{P}\{W_5 > 6 | W_3\}$.
    (a) Write the answer in terms of

$$F(t) \stackrel{\text{def}}{=} \int_{s=-\infty}^{t} \frac{1}{\sqrt{2\pi}} \exp\left[-\tfrac{1}{2}s^2\right] ds \qquad t \in \mathbb{R}$$

    (b) Write the answer in terms of erf.

14. Compute $\mathbb{E}[W_5^3 | W_3]$.