Lecture 4 — Derived Random Variables

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- We can find:

$$E[Y] = E[g(X)] = \int_{-\infty}^{\infty} g(x) f_X(x)\, dx$$

- Similarly:

$$E[Y^n] = E[g^n(X)] = \int_{-\infty}^{\infty} g^n(x) f_X(x)\, dx$$