

**Result 0.0.1.**

- Consider a constant r.v.  $X = c$ , i.e.  $X(\omega) = c$  for all  $\omega \in \Omega$ . Then  $\sigma(X)$  is the trivial  $\sigma$ -algebra  $\mathcal{A}_0 = \{\emptyset, \Omega\}$ .

- $\mathbb{E}[\cdot|\mathcal{A}_0] = \mathbb{E}[\cdot]$ .