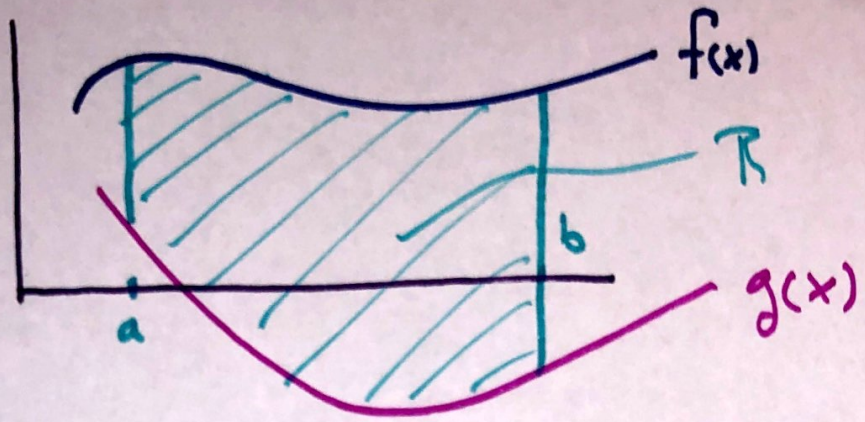
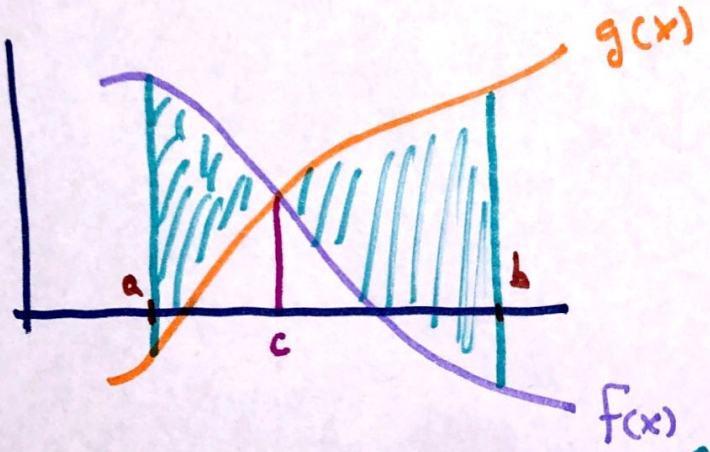
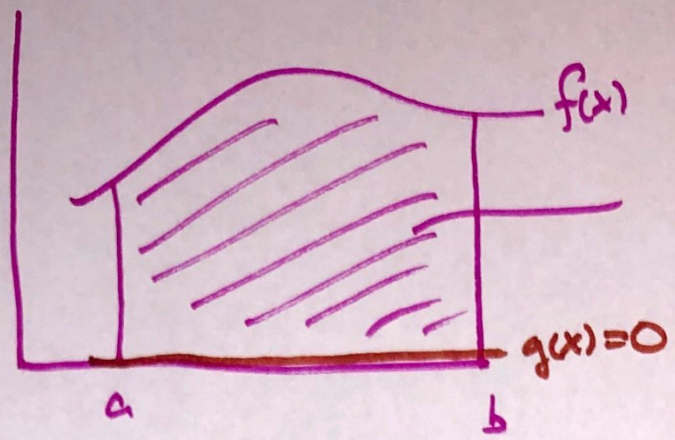
§6.1 - Area Between Curves



$$\text{Area}(R) = \int_a^b f(x) - g(x)\,dx$$

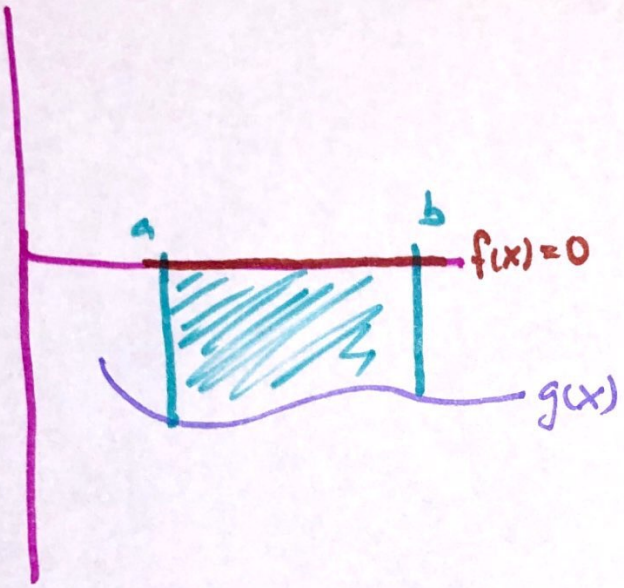


$$\text{Area} = \int_a^b |f(x) - g(x)|\,dx = \int_a^c f(x) - g(x)\,dx + \int_c^b g(x) - f(x)\,dx$$



$$\text{Area} = \int_a^b f(x) - 0 \, dx$$

$$= \int_a^b f(x) \, dx$$



$$\text{Area} = \int_a^b 0 - g(x) \, dx$$

$$= -\int_a^b g(x) \, dx$$