


$$f_X(x) = \int_{-\infty}^{\infty} f_{X,Y}(x,y)dy$$

$$= \begin{cases} \int_0^1 \frac{6}{5}(x+y^2)dy, & 0 \leq x \leq 1 \\ 0, & \text{otherwise} \end{cases}$$

 this is a little tricky.