AM 165:   Homework # 7 (Due Nov 8)

The book we refer to is Wackerly, Mendenhall & Scheaffer, *Mathematical Statistics with Applications* (6th Edition).

- Solve problems 5.75, 5.80, 5.84, 5.86, 5.87, 5.115(a), 5.127(a), 6.5, 6.72, 6.73.

- Suppose that X and Y has joint density

$$f(x, y) = \begin{cases} 2 & \text{if } x \geq 0, y \geq 0, x + y \leq 1 \\ 0 & \text{otherwise} \end{cases}$$

Determine the conditional expectation $E[Y|X]$.