

**Math 477 REAL QUIZ #7**

**NAME:** (print!) \_\_\_\_\_

**E-MAIL ADDRESS:** (print!) \_\_\_\_\_

**1.** (6 points) The return on two investments,  $X$  and  $Y$ , follows the joint density function

$$f(x, y) = \begin{cases} \frac{1}{4} & , \text{ if } 0 < x + |y| < 2 \text{ and } x > 0; \\ 0 & , \text{ otherwise.} \end{cases} .$$

Find the marginal density functions  $f_X(x)$  and  $f_Y(y)$  and use them to find  $E[X]$  and  $E[Y]$ .

**2.** (4 points) Two friends decide to meet at a certain restaurant. If each of them independently arrives at a time uniformly distributed between 12noon and 12 : 30pm. Find the probability that the first to arrive has to wait longer than 10 minutes.