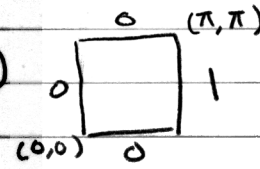
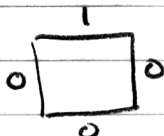
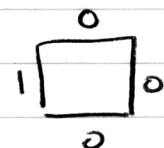
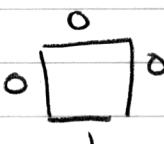
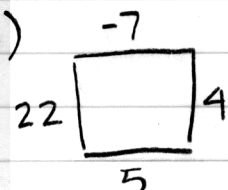


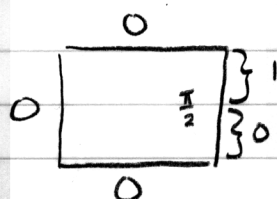
1.)   $u_{xx} + u_{yy} = 0$   
 $U(x, y)$

a)   $V(x, y) = U(y, x)$

b)   $W(x, y) = U(\pi - x, y)$

c)   $Z(x, y) = U(\pi - y, x)$

d)   $4U(x, y) - 7U(y, x) + 22U(\pi - x, y) + 5U(\pi - y, x)$

2.)   $u_{xx} + u_{yy} = 0$   
 $\sum_{n=1}^{\infty} a_n \sinh(nx) \sin(ny)$

(From the work done in class)

$$a_n = \frac{2}{\pi \sinh(n\pi)} \int_0^{\pi} \frac{1}{\sinh(ny)} \sin(ny) dy$$

$$\Downarrow$$

$$\int_{\frac{\pi}{2}}^{\pi} 1 \sin(ny) dy$$