2 1	L	C	R
U	10, 0	0, 10	3, 3
M	2, 10	10, 2	6, 4
D	3, 3	4, 6	6, 6

2. For the game in Exercise 1 of Chapter 4, determine the following sets of best responses.

(a) $BR_1(\theta_2)$ for $\theta_2 = (1/3, 1/3, 1/3)$
(b) $BR_2(\theta_1)$ for $\theta_1 = (0, 1/3, 2/3)$
(c) $BR_1(\theta_2)$ for $\theta_2 = (5/9, 4/9, 0)$
(d) $BR_2(\theta_1)$ for $\theta_1 = (1/3, 1/6, 1/2)$

a)
$$U = 10/3 + 0 + 3/3 = 13/3$$
$$M = 2/3 + 10/3 + 6/3 = 18/3$$
$$D = 3/3 + 4/3 + 6/3 = 13/3$$
$$\rightarrow BR_1(\theta_2) = \{M\}$$

b)
$$L = 0 + 10/3 + 6/3 = 16/3$$
$$C = 0 + 2/3 + 12/3 = 14/3$$
$$R = 0 + 4/3 + 12/3 = 16/3$$
$$\rightarrow BR_2(\theta_1) = \{L, R\}$$

c)
$$U = 50/9 + 0 + 0 = 50/9$$
$$M = 10/9 + 40/9 + 0 = 50/9$$
$$D = 15/9 + 16/9 + 0 = 31/9$$
$$\rightarrow BR_1(\theta_2) = \{U, M\}$$

d)
$$L = 0 + 10/6 + 9/6 = 19/6$$
$$C = 20/6 + 2/6 + 18/6 = 40/6$$
$$R = 6/6 + 4/6 + 18/6 = 28/6$$
$$\rightarrow BR_2(\theta_1) = \{C\}$$