

Exercise 5

1

|         | $\top$         | 0              | 1              | 2              | 3              |
|---------|----------------|----------------|----------------|----------------|----------------|
| $\perp$ | 0              | 0              | $\frac{6}{10}$ | $\frac{4}{10}$ | 0              |
| 0       | $\frac{2}{6}$  | 0              | $\frac{1}{6}$  | 0              | $\frac{3}{6}$  |
| 1       | $\frac{2}{9}$  | $\frac{1}{9}$  | 0              | $\frac{2}{9}$  | $\frac{4}{9}$  |
| 2       | $\frac{2}{9}$  | $\frac{2}{9}$  | 0              | 0              | $\frac{5}{9}$  |
| 3       | $\frac{4}{16}$ | $\frac{3}{16}$ | $\frac{2}{16}$ | $\frac{3}{16}$ | $\frac{4}{16}$ |

2

|         | $\top$        | 0             | 1              | 2              | 3             |
|---------|---------------|---------------|----------------|----------------|---------------|
| $\perp$ |               |               | $\frac{6}{10}$ | $\frac{4}{10}$ |               |
| 00      | 0             | 0             | 0              | 0              | 0             |
| 01      | 1             | 0             | 0              | 0              | 0             |
| 02      | 0             | 0             | 0              | 0              | 0             |
| 03      | $\frac{2}{3}$ | 0             | 0              | 0              | $\frac{1}{3}$ |
| 10      | 0             | 0             | 0              | 0              | 1             |
| 11      | 0             | 0             | 0              | 0              | 0             |
| 12      | $\frac{1}{2}$ | $\frac{1}{2}$ | 0              | 0              | 0             |
| 13      | 0             | $\frac{1}{4}$ | $\frac{1}{4}$  | 0              | $\frac{2}{4}$ |
| 20      | $\frac{1}{2}$ | 0             | 0              | 0              | $\frac{1}{2}$ |
| 21      | 0             | 0             | 0              | 0              | 0             |
| 22      | 0             | 0             | 0              | 0              | 0             |
| 23      | $\frac{1}{5}$ | $\frac{1}{5}$ | 0              | $\frac{2}{5}$  | $\frac{1}{5}$ |
| 30      | $\frac{1}{3}$ | 0             | $\frac{1}{3}$  | 0              | $\frac{1}{3}$ |
| 31      | $\frac{1}{2}$ | 0             | 0              | $\frac{1}{2}$  | 0             |
| 32      | $\frac{1}{3}$ | $\frac{1}{3}$ | 0              | 0              | $\frac{1}{3}$ |
| 33      | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$  | $\frac{1}{4}$  | 0             |

Exercise 7

1

| $b_i$ | $Pr(b_i)$ | $r_i$ | $Pr(r_i)$ | $r'_i$ | $Pr(r'_i)$ |
|-------|-----------|-------|-----------|--------|------------|
| 0     | 0.75      | 0     | x         | 0      | $0.75 * x$ |
| 0     | 0.75      | 1     | y         | 1      | $0.75 * y$ |
| 1     | 0.25      | 0     | x         | 1      | $0.25 * x$ |
| 1     | 0.25      | 1     | y         | 0      | $0.25 * y$ |