

| $X \setminus Y$ | $Y=0$ | $Y=1$ | $Y=2$ |
|-----------------|--------------|--------------|--------------|
| $X=0$ | $7/6844$ | $189/17110$ | $1071/34220$ |
| $X=1$ | $483/34220$ | $315/3422$ | $5031/34220$ |
| $X=2$ | $1771/34220$ | $3243/17110$ | $543/3422$ |

b)

To define the marginal probability mass function of X we should add values in rows

| $X \setminus Y$ | $Y=0$ | $Y=1$ | $Y=2$ | |
|-----------------|--------------|--------------|--------------|---------------|
| $X=0$ | $7/6844$ | $189/17110$ | $1071/34220$ | $371/8555$ |
| $X=1$ | $483/34220$ | $315/3422$ | $5031/34220$ | $2166/8555$ |
| $X=2$ | $1771/34220$ | $3243/17110$ | $543/3422$ | $13687/34220$ |

To define the marginal probability mass function of Y we should add values in columns

| $X \setminus Y$ | $Y=0$ | $Y=1$ | $Y=2$ |
|-----------------|--------------|--------------|--------------|
| $X=0$ | $7/6844$ | $189/17110$ | $1071/34220$ |
| $X=1$ | $483/34220$ | $315/3422$ | $5031/34220$ |
| $X=2$ | $1771/34220$ | $3243/17110$ | $543/3422$ |
| | $2289/34220$ | $5007/17110$ | $2883/8555$ |

| $X \setminus Y$ | $Y=0$ | $Y=1$ | $Y=2$ |
|-----------------|-------|-------|-------|
| | | | |
| | | | |
| | | | |