2. Consider the data set shown in Table 6.1.

(a) Compute the support for itemsets *{e}*, *{b, d}*, and *{b, d, e}* by treating

each transaction ID as a market basket.

(b) Use the results in part (a) to compute the confidence for the association

rules *{b, d} −→ {e}* and *{e} −→ {b, d}*. Is confidence a symmetric

measure?

**Table 6.1.** Example of market basket transactions.

|  |  |  |
| --- | --- | --- |
| Customer ID | Transaction ID | Items Bought |
| **1** | 1 | {a, d, e} |
| 1 | 24 | {a, b, c,e} |
| 2 | 12 | {a, b, d,e} |
| 2 | 31 | {a, c, d,e} |
| 3 | 15 | {b, c, e} |
| 3 | 22 | {b, d, e} |
| 4 | 29 | {c, d} |
| 4 | 40 | {a, b, c} |
| 5 | 33 | {a, d, e} |
| 5 | 38 | {a, b, e} |