Name _____ Score _____ Teacher _____ Date _____

Joint Discrete Distributions

Use the complete labeled joint PMF table. Show normalization, requested sums, and marginal products before deciding independence.

1. **3x3 table. Rows X=68,69,70; columns Y=166,167,168; weights / 36: 1,2,3 / 2,4,6 / 3,6,9. Find the full conditional PMF of Y given X=70.**

Assumptions: The displayed support is complete; omitted pairs have probability 0.

Independence requires equality in every cell.

2. **2x3 table. Rows X=82,83; columns Y=194,195,196; weights / 18: 1,2,3 / 2,4,6. Find F(82,195).**

Assumptions: The displayed support is complete; omitted pairs have probability 0.

Independence requires equality in every cell.

Name _____ Score _____ Teacher _____ Date _____

Joint Discrete Distributions

Use the complete labeled joint PMF table. Show normalization, requested sums, and marginal products before deciding independence.

3. **2x3 table. Rows X=7,8; columns Y=44,45,46; weights / 45: 6,11,5 / 10,4,9. Find E(X), E(Y), E(XY).**

Assumptions: The displayed support is complete; omitted pairs have probability 0.

Independence requires equality in every cell.

4. **2x2 table. Rows X=12,13; columns Y=54,55; weights / 9: 1,2 / 2,4. Find P(X=13 or Y=54).**

Assumptions: The displayed support is complete; omitted pairs have probability 0.

Independence requires equality in every cell.

Name _____ Score _____ Teacher _____ Date _____

Joint Discrete Distributions

Use the complete labeled joint PMF table. Show normalization, requested sums, and marginal products before deciding independence.

5. **2x3 table. Rows X=4,5; columns Y=38,39,40; weights / 18: 1,2,3 / 2,4,6. Are X and Y independent? Check every cell.**

Assumptions: The displayed support is complete; omitted pairs have probability 0.

Independence requires equality in every cell.

6. **2x3 table. Rows X=-65,-64; columns Y=-100,-99,-98; weights / 26: 0,4,9 / 3,8,2. Find both full marginal PMFs.**

Assumptions: The displayed support is complete; omitted pairs have probability 0.

Independence requires equality in every cell.

Name _____ Score _____ Teacher _____ Date _____

Joint Discrete Distributions

Use the complete labeled joint PMF table. Show normalization, requested sums, and marginal products before deciding independence.

7. **3x3 table. Rows X=-52,-51,-50; columns Y=-74,-73,-72; weights / 36: 1,2,3 / 2,4,6 / 3,6,9. Find c and identify zero-probability cells.**

Assumptions: The displayed support is complete; omitted pairs have probability 0.

Independence requires equality in every cell.

8. **2x3 table. Rows X=43,44; columns Y=116,117,118; weights / 33: 4,9,3 / 8,2,7. Find both full marginal PMFs.**

Assumptions: The displayed support is complete; omitted pairs have probability 0.

Independence requires equality in every cell.