IMM - DTU

02405 Probability
2003-10-5
BFN/bfn

Solution for exercise 3.1.5 in Pitman

The random variable $Z = X_1X_2$ has range $\{1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, 16, 18, 20, 24, 25, 36\}$. We find the probability of $Z = i$ by counting the combinations of X_1, X_2 for which $X_1X_2 = i$. we get:

$Z = i$	$P(Z = i)$
1	$\frac{1}{36}$
2	$\frac{2}{36}$
3	$\frac{2}{36}$
4	$\frac{3}{36}$
5	$\frac{2}{36}$
6	$\frac{4}{36}$
8	$\frac{2}{36}$
9	$\frac{1}{36}$
10	$\frac{2}{36}$
12	$\frac{4}{36}$
15	$\frac{2}{36}$
16	$\frac{1}{36}$
18	$\frac{2}{36}$
20	$\frac{2}{36}$
24	$\frac{2}{36}$
25	$\frac{1}{36}$
30	$\frac{2}{36}$
36	$\frac{1}{36}$