

Eksempel: Simultan punktsannsynlighet for diskrete stokastiske variabler

Kast to terninger. Utfallsrommet er:

(1,6)	(2,6)	(3,6)	(4,6)	(5,6)	(6,6)
(1,5)	(2,5)	(3,5)	(4,5)	(5,5)	(6,5)
(1,4)	(2,4)	(3,4)	(4,4)	(5,4)	(6,4)
(1,3)	(2,3)	(3,3)	(4,3)	(5,3)	(6,3)
(1,2)	(2,2)	(3,2)	(4,2)	(5,2)	(6,2)
(1,1)	(2,1)	(3,1)	(4,1)	(5,1)	(6,1)

Ser på de stokastiske variablene

X ="sum antall øyne"

Y ="største antall øyne"

De marginale punktsannsynlighetene $P(X=x)$ og $P(Y=y)$ er gitt i siste kolonne og rad i tabellen

$y \backslash x$	2	3	4	5	6	7	8	9	10	11	12	$P(Y=y)$
1	$\frac{1}{36}$											$\frac{1}{36}$
2		$\frac{2}{36}$	$\frac{1}{36}$									$\frac{3}{36}$
3			$\frac{2}{36}$	$\frac{2}{36}$	$\frac{1}{36}$							$\frac{5}{36}$
4				$\frac{2}{36}$	$\frac{2}{36}$	$\frac{2}{36}$	$\frac{1}{36}$					$\frac{7}{36}$
5					$\frac{2}{36}$	$\frac{2}{36}$	$\frac{2}{36}$	$\frac{2}{36}$	$\frac{1}{36}$			$\frac{9}{36}$
6						$\frac{2}{36}$	$\frac{2}{36}$	$\frac{2}{36}$	$\frac{2}{36}$	$\frac{2}{36}$	$\frac{1}{36}$	$\frac{11}{36}$
$P(X=x)$	$\frac{1}{36}$	$\frac{2}{36}$	$\frac{3}{36}$	$\frac{4}{36}$	$\frac{5}{36}$	$\frac{6}{36}$	$\frac{5}{36}$	$\frac{4}{36}$	$\frac{3}{36}$	$\frac{2}{36}$	$\frac{1}{36}$	