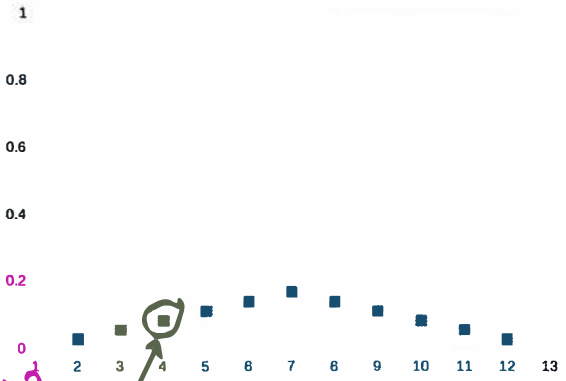
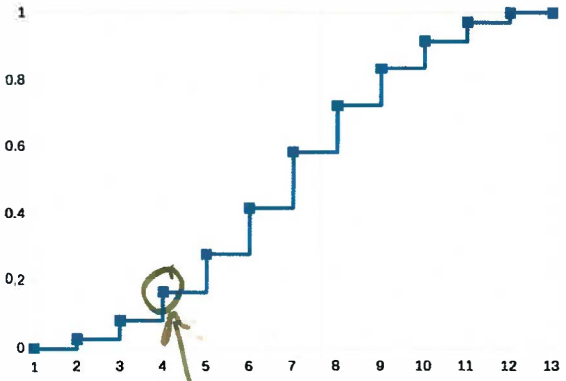
Roll two fair dice.

- $\Omega = \{(1,1),(1,2),\ldots,(5,6),(6,6)\}$
- $P(i,j) =$ 1/36 for each (i,j).
- Write $X =$ the sum of the two dice.

Plot of PMF



Plot of CDF



Minute to think?

$P_X(4) = P(X=4)$

$= P(\{(1,3),(2,2),(3,1)\})$

$= 3/36 \approx .08$

$F_X(4) = P(X \le 4)$

$= P(X \le 3) + P(X=4)$

$= P(\{(1,1),(2,1),(1,2)\}) + 3/36$

$= 6/36 \approx .16$