

2

a)

i)

Let

$$\begin{aligned} \Omega &:= \{1, 2, 3, 4, 5, 6\} \text{ (rolling a die)} \\ A &:= \{1, 2, 3\} \text{ (first three numbers)} \end{aligned}$$

And thus  $\Pr[A] > \Pr[A|B]$ .

□

ii)