1. Suppose that a box has $b$ black balls and $r$ red balls. We draw $n$ balls from the box.
   What is the probability that we selected either 2 or 3 red balls (assume that $b \geq 3$)?
Answers

1. \[
\frac{\left\{ \binom{b}{2}(n-2) + \binom{b}{3}(n-3) \right\}}{\binom{n}{b+r}}
\]