

- 2013 5** A bag contains 4 red marbles and 6 blue marbles. Three marbles are selected at random without replacement. What is the probability that at least one of the marbles selected is red?

- (A)  $\frac{1}{6}$  (B)  $\frac{1}{2}$  (C)  $\frac{5}{6}$  (D)  $\frac{29}{30}$

**C**

$$\begin{aligned} P(\text{at least one is red}) &= 1 - P(\text{none red}) \\ &= 1 - \frac{6}{10} \times \frac{5}{9} \times \frac{4}{8} \\ &= \frac{5}{6} \end{aligned}$$

State Mean:  
**0.74**

\* These solutions have been provided by [projectmaths](#) and are not supplied or endorsed by BOSTES.