

Two numbers are selected randomly from the set $S = \{1, 2, 3, 4, 5, 6\}$ without replacement one by one. The probability that minimum of the two numbers is less than 4 is **(2003S)**

(a) $1/15$

(b) $14/15$

(c) $1/5$

(d) $4/5$

(d) The minimum of two numbers will be less than 4 if at least one of the numbers is less than 4.

$$\therefore P(\text{at least one no. is } < 4),$$

$$= 1 - P(\text{both the no's are } \geq 4)$$

$$= 1 - \frac{3}{6} \times \frac{2}{5} = 1 - \frac{6}{30} = 1 - \frac{1}{5} = 4/5$$