Think Academy

# 2025 Sept AMC 8 Week 2 Day 3 - Drawing Problems

1 There are $5$ red balls and $3$ white balls in the box. If two balls are drawn at random, what is the probability of getting one red and one white?

A. $\frac{13}{28}$ B. $\frac{15}{28}$ C. $\frac{15}{56}$ D. $\frac{5}{14}$ E. $\frac{5}{7}$

2 Box A contains $3$ white ping-pong balls numbered $1, 2, 3$. Box B contains $3$ yellow ping-pong balls numbered $4, 5, 6$. One ball is randomly drawn from each box. What is probability that the sum of the two numbers is greater than $6$?

A. $\frac{1}{4}$ B. $\frac{1}{2}$ C. $\frac{2}{3}$ D. $\frac{3}{4}$ E. $\frac{1}{3}$

3 A bag contains $5$ red balls, $6$ white balls, and $3$ black balls. In order for the probability of drawing a black ball to be $\frac{2}{3}$, how many additional black balls must be put into the bag?

A. $15$ B. $16$ C. $17$ D. $18$ E. $19$

4 Vendors often run lottery games at the school gate. One vendor has a black bag containing $50$ balls of different colors: $1$ red, $2$ yellow, $10$ green, and the rest white. After mixing them thoroughly, the rule is: each draw costs $2$ dollars for $1$ ball.

Drawing a red ball wins a prize worth $8$ dollars.

Drawing a yellow ball wins a prize worth $5$ dollars.

Drawing a green ball wins a prize worth $2$ dollars.

Drawing a white ball wins no prize.

If you spend $4$ dollars to draw $2$ balls at the same time, what is the probability of obtaining a prize worth $10$ dollars?

A. $\frac{18}{1225}$ B. $\frac{11}{1225}$ C. $\frac{121}{225}$ D. $\frac{11}{245}$ E. $\frac{2}{245}$

5

A bag contains $5$ balls that are identical in size and shape: $3$ white balls and $2$ red balls. Two balls are drawn with replacement. What is the probability that the two balls are of different colors?

A. $\frac{2}{5}$ B. $\frac{11}{25}$ C. $\frac{12}{25}$ D. $\frac{13}{25}$ E. $\frac{3}{5}$