

AMC10 2019 A4

A box contains 28 red balls, 20 green balls, 19 yellow balls, 13 blue balls, 11 white balls, and 9 black balls. What is the minimum number of balls that must be drawn from the box without replacement to guarantee that at least 15 balls of a single color will be drawn?

- A. 75 B. 76 C. 79 D. 84 E. 91

The maximum number of balls we can draw without drawing 15 of the same color comes from this scenario: we draw 14 red, 14 green, 14 yellow, 13 blue, 11 white, and 9 black. This gives us 75 balls. Drawing one more ball will guarantee us 15 of the same color, so the answer is B (76).