GMAT

Quant Section Test

[PROBABILITY]
- Questions

1. Amanda is making cards for playing cards with her friends. If there are 20 cards that have either a blue number or a purple number that is between 1 and 15 inclusive, what is the probability that a card will either be blue or odd?
   (1) The probability that the card is blue and odd is 10%.
   (2) The probability that the card will be blue minus the probability that it will be odd is 20%.

   A. Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
   B. Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
   C. Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
   D. Each statement alone is sufficient to answer the question.
   E. Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

2. A bag contains only red pebbles and orange pebbles. If two thirds of the pebbles are red, how many orange pebbles are in the bag?
   (1) If two pebbles were to be drawn, simultaneously and at random, from the bag, there is a 5/12 probability that both would be red.
   (2) If one orange pebble were removed from the bag, there would be a 1/4 probability that the next randomly-drawn pebble would be orange.

   A. Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
   B. Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
   C. Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
   D. Each statement alone is sufficient to answer the question.
   E. Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

3. Serena Williams and Venus Williams play a series of 5 tennis games. The probability that Serena wins a game is 2/5. The series will be won by the person who wins 3 matches. What is the probability that Serena wins the series?
   (1) The series ends the moment when any of the two wins 3 matches.
   (2) The probability that Venus wins a game is 3/5.
   A. Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
   B. Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
   C. Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
   D. Each statement alone is sufficient to answer the question.
   E. Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

4. In a university of 30 professors, there are 17 female professors and 13 male professors. In that five professors are BEST professors, and three of these professors are female professors. If a professor is chosen at random, what is the probability of choosing a female professor or a BEST professor?
    A. 17/180
    B. 19/30
    C. 11/15
    D. 14/15
    E. None of the above.

5. Joy and Joe decide to have 8 children. If they succeed in having 8 kids and each kid equally likely to be a boy or a girl, what is the probability that they will have exactly 4 girls?
    A. $\dfrac{75}{128}$
    B. $\dfrac{55}{256}$
    C. $\dfrac{35}{128}$
    D. $\dfrac{45}{128}$
    E. $\dfrac{25}{128}$