Weekly Quant Quiz : 15 September 2018

Q1. Which of the following set of numbers has the greatest standard deviation?

(A) {-3, 1, 2}

(B) {-2, -1, 1, 2}

(C) {3, 5, 7}

(D) {-1, 2, 3, 4}

(E) {0, 2, 4}

https://gmatclub.com/forum/which-of-the-following-distribution-of-numbers-has-the-greatest-standa-218777.html

Q2. If the average (arithmetic mean) of 4 numbers is 30, how many of the numbers are greater than 30 ?

(1) Two of the numbers are equal to 20.

(2) None of the numbers are equal to 30.

https://gmatclub.com/forum/if-the-average-arithmetic-mean-of-4-numbers-is-30-how-128087.html

Q3. If $a < -1$, is b between 0 and 1?

(1) $-b < -a$

(2) $-1 < ab < 0$

https://gmatclub.com/forum/if-a-1-is-b-between-0-and-254124.html

Q4. A number of oranges are to be distributed evenly among a number of baskets. Each basket will contain at least one orange. If there are 20 oranges to be distributed, what is the number of oranges per basket?

(1) If the number of baskets were halved and all other conditions remained the same, there would be twice as many oranges in every remaining basket.
(2) If the number of baskets were doubled, it would no longer be possible to place at least one orange in every basket.

https://gmatclub.com/forum/a-number-of-oranges-are-to-be-distributed-evenly-among-a-99963.html

Q5. If operation p # q is defined for all integers p and q, such that t p # q = p+q+pq, which of the following must be true?

I. p # q = q # p
II. p # 1 = 2p + 1
III. p # (q # r) = (p # q) # r

A. I only
B. I and II only
C. I and III only
D. II and III only
E. I, II, and III

https://gmatclub.com/forum/if-operation-p-q-is-defined-for-all-integers-p-and-q-such-that-251756.html

Q6. Is the probability that Patty will answer all of the questions on her chemistry exam correctly greater than 50%?

(1) For each question on the chemistry exam, Patty has a 90% chance of answering the question correctly.
(2) There are fewer than 10 questions on Patty's chemistry exam.

https://gmatclub.com/forum/is-the-probability-that-patty-will-answer-all-of-the-questio-170329.html

Q7. In triangle PQR, the angle Q = 90 degree, PQ = 6 cm, QR = 8 cm. X is a variable point on PQ. The line through X parallel to QR, intersects PR at Y and the line through Y, parallel to PQ, intersects QR at Z. Find the least possible length of XZ

A. 3.6 cm
B. 2.4 cm
C. 4.8 cm
D. 2.16 cm
E. 3.2 cm

https://gmatclub.com/forum/in-triangle-pqr-the-angle-q-9-pq-6-cm-qr-8-cm-x-is-161440.html

Q8. If n is a non-negative integer and the remainder when 3^n is divided by 4 is a multiple of 3, then which of the following must be true?

I. n^2 divided by 4 yields the reminder of 1
II. (-2)^n is less than 0
III. n is a prime number

A. I only
B. II only
C. III only
D. I and II only
E. II and III only

https://gmatclub.com/forum/new-set-of-mixed-questions-150204-100.html#p1208471

Q9. Two kinds of Vodka are mixed in the ratio 1:2 and 2:1 and they are sold fetching the profit 10% and 20% respectively. If the vodkas are mixed in equal ratio and the individual profit percent on them are increased by 4/3 and 5/3 times respectively, then the mixture will fetch the profit of

A. 18%
B. 20%
C. 21%
D. 23%
E. Cannot be determined

https://gmatclub.com/forum/two-kinds-of-vodka-are-mixed-in-the-ratio-1-2-and-2-1-and-113897.html

Q10. If $1 > 1 - ab > 0$, which of the following must be true?

I. $a/b > 0$
I. $a/b < 1$
III. $ab < 1$

(A) I only
(B) II only
(C) III only
(D) I and II only
(E) I and III only

https://gmatclub.com/forum/if-1-1-ab-0-which-of-the-following-must-be-true-200444.html

Q11. What is the sum of first 10 non-negative even integers?

A) 40
B) 90
C) 100
D) 110
E) 200

https://gmatclub.com/forum/what-is-the-sum-of-first-10-non-negative-even-integers-a-40-b-60-c-242936.html

Q12. In the Mundane Goblet competition, 6 teams compete in a “round robin” format: that is, each team plays every other team exactly once. A team gets 3 points for a win, 1 point for a tie (a draw), and 0 points for a loss. What is the difference between the maximum total points and the minimum total points that can be gained by all teams (added together) in the Mundane Goblet competition?

(A) 15
(B) 30
(C) 45
(D) 60
(E) 75

https://gmatclub.com/forum/in-the-mundane-goblet-competition-6-teams-compete-in-a-96952.html

Q13. A bag contains 3 white balls, 3 black balls & 2 red balls. One by one three balls are drawn out without replacement. What is the probability that the third ball is red?

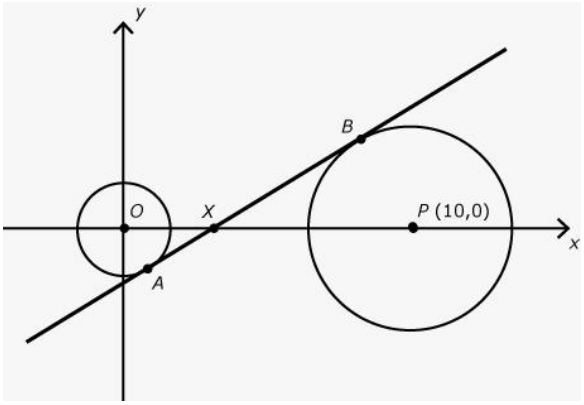
A. 0.25
B. 0.15
C. 0.35
D. 0.45
E. 0.40

https://gmatclub.com/forum/a-bag-contains-3-white-balls-3-black-balls-2-red-balls-100023.html

Q14. If $x > x/|x|$, which of the following must be true about x?

(A) $x>1$
(B) $x>-1$
(C) $|x|<1$
(D) $|x|=1$
(E) $|x|^2 >1$

https://gmatclub.com/forum/if-x-x-x-which-of-the-following-must-be-true-about-x-68886.html

Q15. 

In the figure, the circles are centered at O(0, 0) and P(10, 0). Line AB is tangent to both circles, at points A and B respectively, and intersects the x-axis at point X. What is the x-coordinate of point X ?

(1) The area of the circle centered at point P is 4 times the area of the circle centered at point O.
(2) BX is twice as long as AX.

https://gmatclub.com/forum/in-the-figure-above-the-circles-are-centered-at-o-0-0-and-162390.html