



11. If  $a, b, c$  form an A.P. with common difference  $d$ , then the value of  $a - 2b - c$  is equal to  
(A)  $2a + 4d$  (B)  $0$   
(C)  $-2a - 4d$  (D)  $-2a - 3d$
12. If the value of each observation of a statistical data is increased by 3, then the mean of the data  
(A) remains unchanged (B) increases by 3  
(C) increases by 6 (D) increases by  $3n$
13. Probability of happening of an event is denoted by  $p$  and probability of non-happening of the event is denoted by  $q$ . Relation between  $p$  and  $q$  is  
(A)  $p + q = 1$  (B)  $p = 1, q = 1$   
(C)  $p = q - 1$  (D)  $p + q + 1 = 0$
14. A girl calculates that the probability of her winning the first prize in a lottery is 0.08. If 6000 tickets are sold, how many tickets has she bought?  
(A) 40 (B) 240  
(C) 480 (D) 750
15. If  $\alpha, \beta$  are the zeroes of a polynomial  $p(x) = x^2 + x - 1$ , then  $\frac{1}{\alpha} + \frac{1}{\beta}$  equals to  
(A) 1 (B) 2  
(C) -1 (D)  $-\frac{1}{2}$
16. The least positive value of  $k$ , for which the quadratic equation  $2x^2 + kx - 4 = 0$  has rational roots, is  
(A)  $\pm 2\sqrt{2}$  (B) 2  
(C)  $\pm 2$  (D)  $\sqrt{2}$
17.  $\left[ \frac{5}{8} \sec^2 60^\circ - \tan^2 60^\circ + \cos^2 45^\circ \right]$  is equal to  
(A)  $-\frac{5}{3}$  (B)  $-\frac{1}{2}$   
(C) 0 (D)  $-\frac{1}{4}$
18. Curved surface area of a cylinder of height 5 cm is  $94.2 \text{ cm}^2$ . Radius of the cylinder is (Take  $\pi = 3.14$ )  
(A) 2 cm (B) 3 cm  
(C) 2.9 cm (D) 6 cm