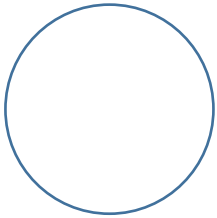
Markhor Junior Contest 2022

Pioneer Level (CLASS VII & VIII) Mathematics

Time Allowed 60 Minutes

19 problems to solve: five – 1 point each, five – 2 points each, five – 3 points each, and four – 5 points each

1. What is the area of a circle with a circumference is $2\pi r$?



   a. $2\pi r^2$
   b. πr^2
   c. $\frac{\pi^2}{r}$
   d. $\frac{\pi}{r^2}$

2. If the endpoints of line segments are $P(x_{1,}y_1)$ and $Q(x_2, y_2)$ what is the midpoint?

   a. $\left(\frac{x_1}{2}, \frac{y_1}{2}\right)$
   b. $\left(\frac{x_2}{2}, \frac{y_2}{2}\right)$
   c. $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$
   d. $\left(\frac{x_1+y_1}{2}, \frac{x_2+y_2}{2}\right)$

3. Atif is rolling a die, what is the probability of getting a 4 or an even number?

a. $\frac{1}{2}$ b. $\frac{2}{3}$ c. $\frac{1}{3}$ d. $\frac{1}{6}$

4. Solve $\left(\sqrt{\sqrt{\sqrt{\sqrt{5}}}}\right)^{32}$

a. 125
b. 25
c. 75
d. 150

5. There are 10 friends on Eid day greeting each other by handshaking. How many handshakes will be?

a. 50
b. 100
c. 45
d. 20

6. In Markhor Junior Contest there are 25 students in a particular class who participated in the Mathematics Contest which is 50% of the class. 80% participated in English Contest. How many students participated in the English language Contest?

a. 30
b. 40
c. 50

d. 80

7. Mirha and Ayesha have 25 candies collectively. If we double Ayesha's candies, then Mirha has double of it. How many cadies does Ayesha have?

   a. 10
   b. 15
   c. 5
   d. 20

8. Find the value in term of x if $\frac{1}{4}\times\frac{3}{6}\times\frac{5}{1}\times\frac{6}{2}\times\frac{1}{x}$

   a. $\frac{7}{3x}$
   b. $\frac{15}{8x}$
   c. $\frac{9}{4x}$
   d. $\frac{3}{x}$

9. There are 4 boxes with 1,3,5,7 footballs. How many footballs should we move to make an equal number of balls and equal numbers of boxes?

   a. 3
   b. 4
   c. 5
   d. 7

10. There are two columns below.

The number of positive multiples of 49 less than 2000	The number of positive multiples of 50 less than or equal to 2000

a. The quantity in Column A is greater
b. The quantity in Column B is greater
c. The two quantities are equal
d. The relationship cannot be determined from the information given

11. The square root of 2 billion is between.

a. 2,000 and 5,000
b. 5,000 and 15,000
c. 15,000 and 30,000
d. 30,000 and 50,000

12. How many different 3-digit numbers are greater than 299 and do not contain the digits 1, 6, or 8?

a. 222
b. 245
c. 291
d. 315

13. A manager must create a 2-person committee from a group of 4 employees. In how many different ways can this be accomplished?

    a. 8
    b. 6
    c. 12
    d. 4

14. A theater sells children's tickets for half the adult ticket price. If 5 adult tickets and 6 children's tickets cost a total of 240 rupees, what is the cost of an adult ticket?

    a. 5
    b. 10
    c. 20
    d. 30

15. The opening Ceremony of the 2016 Olympics began at 9 am on Saturday 6th of August. However, if they began 2/3 of an hour late, and the ceremony Lasted 3.2 hours, at what time did it finish?

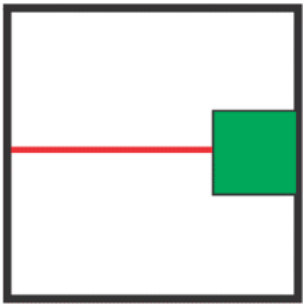
    a. 12:40 pm
    b. 12:52pm
    c. 1:52pm
    d. 2:20pm

16. In a farmhouse, there are 3 times as many sheep as there are cows. If there are no more than 200 cows and sheep, how many cows are there?

    a. 40
    b. 60
    c. 80
    d. 200

17. The area of the big square is $900\,cm^2$. The area of the green square is $144\,cm^2$ .What is the length of the red line?

    a. 12
    b. 30
    c. 18
    d. 14



18. The Sum of the three sides of a rectangle is 35cm. If we exchange one side either length or width (width to length or length to width) our new sum will be 40. What is the perimeter of the rectangle?

    a. 45
    b. 50
    c. 75
    d. 90

19. The average of seven consecutive numbers is 15. What is the sum of the least and greatest of seven numbers?

    a. 15
    b. 30
    c. 36
    d. 44