

Markhor Junior Contest 2020

Pioneer Level (Class VII & VIII)
Mathematics Time Allowed 60 Minutes

There are 19 problems, graded as follows:

Questions 1-5 are 1 point each,

Questions 6-10 are 2 points each,

Questions 11-15 are 3 points each,

Questions 16-19 are 5 points each.

1. Out of 2500 people, only 60% have the saving habit. If 30% save with the bank 32% with the post office and the rest with shares. The number of shareholders are
 - a) 450
 - b) 570
 - c) 950
 - d) 1250

2. Find the error percent in taking the area of a rectangular park which is 50m wide and 70m long as $3850 m^2$.
 - a) 10%
 - b) 20%
 - c) 35%
 - d) 350%

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3. **Determine the future value of an investment of Rs. 7000, which has accrued to Rs. 9800 after 10 years at simple interest. Calculate the amount after an additional 5-year period, assuming the same interest rate.**
 - a) Rs.8400
 - b) **Rs.11760**
 - c) Rs.10800
 - d) Rs.14400
4. **Divide Rs.2500 into two parts such that the simple interest on one at 4% for 5 years is double that of the other at 5% for 3 years.**
 - a) Rs.1200, Rs.1300
 - b) **Rs.1000, Rs.1500**
 - c) Rs.2000, Rs.500
 - d) Rs.800, Rs.1700
5. **A fraction whose numerator and denominator are either or both fractions is called a.**
 - a) Reciprocal
 - b) **Complex**
 - c) Division
 - d) None
6. **By which decimal number should 0.0001 be divided to get 0.01 ?**
 - a) 0.1
 - b) **0.01**
 - c) 0.001
 - d) none of these

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7. **The reciprocal of a rational number is also called its**
- a) Additive inverse
 - b) Multiplicative inverse**
 - c) None of these
 - d) both (a) and (b)
8. **A train covers a distance of 12km in 10 minutes. If it takes 6 seconds to pass an electric pole, then the length of the train is**
- a) 90m
 - b) 100m
 - c) 120m**
 - d) 140m
9. **Two rational numbers, can be compared by finding their.**
- a) Difference method
 - b) Product method
 - c) Cross product**
 - d) None of these
10. **The cardinal number of the set of the letters of the word 'SCHOOL' is**
- a) 6
 - b) 5**
 - c) 7
 - d) 4

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11. If $2A = 3B$ and $4B = 5C$ then $C:A = ?$

- a) 4:3
- b) 8:15
- c) 3:4
- d) 15:8

12. If 15% of $A = 20\%$ of B then $A:B = ?$

- a) 3:4
- b) 4:3
- c) 17:16
- d) 16:17

13. The work done by an inlet is always positive whereas the work done by the outlet is always

- a) negative
- b) positive
- c) neutral
- d) none

14. The smallest number by which 2700 is divided to make it perfect square is

- a) 5
- b) 2
- c) 3
- d) 9

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15. A water tank has two leaks. The first leak alone would have emptied the tank in 15 hours, and the second leak alone would have done it in 10 hours. If water leaks out at a constant rate, how long will it take both leaks together to empty the tank?

- a) 4.7 hours
- b) 6.0 hours
- c) 8.3 hours
- d) 12.0 hours

16. For any three-digit number abc , determine which number does NOT divide the difference between abc and its reverse (cba).

- a) 9
- b) 15
- c) 18
- d) 33

17. In a triangle, two interior angles are in the ratio 2:3:4. Find the smallest angle.

- a) 30°
- b) 40°
- c) 45°
- d) 60°

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18. If a polygon has 12 sides, what is the sum of its interior angles?

- a) 1800°
- b) 2160°
- c) 2520°
- d) 2880°

19. If $(5x-140)^\circ$ and $(3x+100)^\circ$ are vertically opposite angles then the value of 'x' is

- a) 120°
- b) 240°
- c) 480°
- d) 960°