

Markhor Junior Contest 2021

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. 50% of a certain number is 450, find the number
 - a) 900
 - b) 1000
 - c) 800
 - d) 500

2. An increase from 1 to 3 is what percent of the increase
 - a) 66.7%
 - b) 100%
 - c) 200%
 - d) 300%

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3. At same rate of simple interest, “A” lent Rs.6000 to “B” for 2 years and Rs.1500 to “C” for 4 years and received Rs.900 as interest from both of them together, the rate of interest per annum was.
- a) 5%
 - b) 6%
 - c) 8%
 - d) 10%
4. The ratio 2:5 as rate percent is
- a) 4%
 - b) 0.4%
 - c) 40%
 - d) 14%
5. When 0.232323 is converted into a fraction, then the result is
- a) $\frac{1}{5}$
 - b) $\frac{23}{100}$
 - c) $\frac{23}{99}$
 - d) $\frac{2}{9}$

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6. A number that can be written as $\frac{a}{b}$ where 'a' and 'b' are integers and $b \neq 0$ is called
- a) Natural number
 - b) Whole number
 - c) Rational number
 - d) None of these
7. A pile of paper is $10\frac{1}{2}$ cm high and each sheet is $\frac{7}{100}$ cm thick. Find the number of sheets in the pile.
- a) 100
 - b) 1000
 - c) 700
 - d) 150
8. An express train 440 metres long is running with a speed of 90km/h. In how much time will it pass a tunnel 110 metres long?
- a) 22sec
 - b) 25sec
 - c) 30sec
 - d) 40sec

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9. All _____ decimals are rational numbers

- a) Recurring and Terminating
- b) Only recurring
- c) Only terminating
- d) Non-recurring non-terminating

10. What is the term for the number of unique elements in a finite set?

- a) Set size
- b) Null set
- c) Cardinality
- d) Membership count.

11. If $2P = 3Q$ and $4Q = 5R$, then $R:P = ?$

- a) 8:15
- b) 15:8
- c) 5:6
- d) 6:5

12. If 12% of $P = 16\%$ of Q , then $P:Q = ?$

- a) 3:4
- b) 4:3
- c) 2:3
- d) 3:2

13. The work done by a pump in a plumbing system is always:

- a) Positive
- b) Negative
- c) Neutral
- d) Zero

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- 14. Two pipes, Pipe A and Pipe B, are filling a water tank. Pipe A fills the tank in 12 hours, while Pipe B fills it in 8 hours. How long will it take both pipes together to fill the tank?**
- a) 4.8 hours
 - b) 5.7 hours
 - c) 6.0 hours
 - d) 7.2 hours
- 15. The smallest number by which 4800 is divided to make it a perfect square is:**
- a) 2
 - b) 3
 - c) 5
 - d) 4
- 16. Generalized form of a four- digit number “abdc” is**
- a) $1000a + 100b + 10c + d$
 - b) $1000a + 100c + 10b + d$
 - c) $1000a + 100b + 10d + c$
 - d) $a \times b \times c \times d$
- 17. Two complementary angles are in the ratio 4:5. Find the angles.**
- a) 40 and 50
 - b) 600 and 300
 - c) 450 and 450
 - d) none of these

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18. The sum of the angles round a point is

- a) 180°
- b) 360°
- c) 540°
- d) 720°

19. In the figure $PQ \parallel RS$ find x

- (a) 138°
- (b) 66°
- (c) 70°
- (d) 40°

