



RIMC/SAINIK MODEL PAPER - MATHEMATICS

**DEFENCE ACADEMY-
COIMBATORE**

**YOUR GATEWAY TO CAREER
IN DEFENCE FORCES**

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1. The sum of two consecutive odd number is 68. Find the numbers.
2. Simplify: $(.08)^2 + (.4)^3$
3. How many minutes will be taken by an express train travelling at 60 km per hour to cover 45 km?
4. 80% of the students in a school are boys and the number of girls is 400. How many boys are there?
5. Arrange $\frac{7}{12}$, $\frac{8}{15}$, $\frac{13}{18}$, and $\frac{17}{24}$ in ascending order.
6. What should be added to $4x^2 + 4xy + y^2 + 7xy + y^2$?
7. At what rate percent per annum a sum of money will double itself in 10 years?
8. The custom duty on car has been reduced to Rs. 45,00 from Rs. 48,000. Find the reduction per centage in the custom duty?
9. How many 4 cm cubes can be obtained from a cube whose edge is 16 cm?
10. Find the smallest number which when divided by 25, 40 and 60 leaves remainder 7 in each case?
11. 3 men or 6 boys can do a piece of work in 16 days.
In how many days can 12 men and 8 boys do the same piece of work?
12. A person buys 60 eggs for Rs. 90, Six eggs are broken and the rest sold at a 6 for Rs. 9.
Find his loss or gain %.
13. Find the largest number which divides 245 and 1029 leaving remainder 5 in each case?
14. Diagonal of a square is $15\sqrt{2}$ cm. Find its area and perimeter.
15. Mahesh bought 12 dozen bananas at Rs. 14 per dozen, 8 dozen at Rs. 13 per dozen and 10 dozen at Rs. 16 per dozen. If he sold them all at Rs. 15 per dozen how much per cent was his gain or loss?
16. Express 72 km per hour in metre per second.
17. An alloy is made of 30% copper, 40% tin and the rest of silver. Find the mass of silver in 700gm of alloy.
19. What sum of money lent out at 10% simple interest would produce Rs. 500 as interest in 2 years?
20. Which has the greater area, a square of perimeter 44 cm or a circle of circumference 44 cm?