

CRPF PUBLIC SCHOOL, ROHINI

First Intra School Mathematics Olympiad 2010

CLASS IX

Max. Marks: 60

Time: 1 hour 30 minutes

General Instructions:

1. Each question of Section A (Q1-5) carries 2 marks, that of Section B (Q6-15) carries 3 marks and of Section C (Q16-20) carries 4 marks.
2. Each question has five choices (A, B, C, D or E). Select the correct answer to each question and darken the corresponding circle in the Answer Sheet provided to you. For each correct answer in section A, B and C, two, three and four marks will be awarded respectively. **One mark will be deducted for each incorrect answer (of all the sections), while no mark will be deducted for any unattempted question.** Darkening of more than one circle for any answer shall bear zero mark.
3. Darken the correct circle with HB Pencil ONLY.
4. Do not make any stray marks on the answer sheet and do not use it for any kind of Rough Work.

SECTION - A

Q1. If $P(A)$ denotes the probabilities of an event A, then which of the following is always true?

- (A) $P(A) \leq 0$ (B) $P(A) \geq 0$ (C) $0 \leq P(A) \leq 1$ (D) $-1 \leq P(A) \leq 1$ (E) None

Q2. If the following numbers are written in ascending order then what will be the middle digit of the middle term.
745, 657, 825, 475, 692, 612, 735

- (A) 8 (B) 1 (C) 3 (D) 9 (E) None

Q3. 3 is related to 12 in the same way as 5 is related to

- (A) 15 (B) 25 (C) 30 (D) 35 (E) None

Q4. In (5,12,15) and (7,5,12)

- (A) both are Pythagorean triplets (B) None of the both is Pythagorean triplets
(C) First is Pythagorean triplet while second is not (D) Second is Pythagorean triplet while first is not
(E) Only (A) & (B) are true

Q5. A man travels 1 km due east then 5 km due south and finally 9 km due north. How far he is from the starting point?

- (A) $\sqrt{17}$ km (B) 4km (C) 5km (D) 7km (E) None

SECTION - B

Q6. 5 of 10% + 10 of 5% = ____ of 15%

- (A) $7\frac{1}{3}$ (B) $6\frac{2}{3}$ (C) $8\frac{2}{3}$ (D) $9\frac{1}{6}$ (E) None

Q7. What is the value of $\sqrt{\sqrt[3]{0.000729} + \sqrt{0.961}}$

- (A) 0.63 (B) 0.73 (C) 0.83 (D) 0.93 (E) None

Q8. If a number 'A' is less than a number 'B' then what will be the number which is greater than A and smaller than B.

- (A) $\frac{A+B}{2}$ (B) $\frac{A-B}{2}$ (C) $\frac{B-A}{2}$ (D) $\frac{A \times B}{2}$ (E) None

Q9. The ratio of two numbers is 11:15. If their HCF is 13 then what will be the number respectively.

- (A) 143,195 (B) 195,143 (C) 110,150 (D) 121,165 (E) None

Q10. 40% persons read newspaper 'x' and 50% person read newspaper 'y'. 10% person read both newspapers. How many persons do not read any of the newspaper?

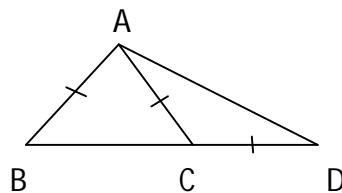
- (A) 10% (B) 20% (C) 5% (D) 15% (E) None

Q11. If Rs 9000 is divided among three workers in the ratio $\frac{1}{3} : \frac{1}{4} : \frac{1}{6}$ respectively, then the share of the third worker is:

- (A) Rs 1000 (B) Rs 2000 (C) 1500 (D) Rs2500 (E) None

Q12. In the given figure, $AB=AC=CD$ and $\angle BAC=32^\circ$, then $\angle BAD$ is:

- (A) 37° (B) 64° (C) 69° (D) 74° (E) 76°



Q13. A rectangular field is 90m x 50m. Inside the field there is a path of width 5m bordering the field. Area of the path is:

- (A) 1450 sq. m (B) 1100 sq. m (C) 1000 sq. m (D) 1300 sq. m (E) 2000 sq. m

Q14. In a certain code 'Fire is coded as 'DGPC'. What will be the last letter of the coded word for 'SHOT'?

- (A) Q (B) P (C) R (D) S (E) Z

Q15. The value of $\frac{2^{10+n} \times 4^{3n-5}}{2^{4n+1} \times 2^{3n-1}}$ is:

- (A) 0 (B) 1 (C) 3 (D) 4 (E) None

SECTION – C

Q16. If 11 pencils are bought for Rs 10 and 10 pencils are sold for Rs 11, then gain % is:

- (A) 18 % (B) 16 % (C) 21 % (D) 10 % (E) 20 %

Q17. In an examination 'A' secured 10 % less marks than 'B'. B secured 25 % more marks than 'C'. C secured 20 % less marks than D. If A secured 360 marks out of 500 then marks secured by D is:

- (A) 60 % (B) 40% (C) 80 % (D) 70% (E) None

Q18. In three numbers, the first number is double of the second and half of the third. If the average of three numbers is 56, then largest number is:

- (A) 96 (B) 108 (C) 92 (D) 84 (E) None

Q19. 3 men or 5 boys can complete a work in 12 days. In how many days 6 men and 3 boys can complete double work?

- (A) $9\frac{3}{13}$ days (B) $6\frac{3}{13}$ days (C) $3\frac{9}{13}$ days (D) $9\frac{2}{13}$ days (E) $6\frac{1}{3}$ days

Q20. The denominator of a rational number is more than its numerator by 5. If 10 is added to the numerator and 1 is subtracted from the denominator, then the fraction becomes 3. Fraction will be:

- (A) $\frac{1}{7}$ (B) $\frac{3}{7}$ (C) $\frac{2}{7}$ (D) $\frac{4}{7}$ (E) None

NOTE: The **answer key** of this question paper will be available on the School's blog www.crpfpsrohini.blogspot.com on November 9, 2010 after 6 pm. The **Result** will be declared on 16 November and will also be available on the school's blog.