

# CRPF PUBLIC SCHOOL, ROHINI

## SECOND Intra School Mathematics Olympiad 2011

### CLASS VIII

Max. Marks: 50

Max. Time: 1 hour 30 minutes

General Instructions:

1. Q1-15 (Section A) each MCQ carries 2 mark. 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. **THERE IS NO NEGATIVE MARKING.** Marking of more than one circle for an answer shall be awarded zero mark.
  2. Q16-20 (Section B) each question carries 4 mark. You are to give the complete solution. Marking will be done stepwise.
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#### SECTION - A

Q1. If  $\frac{x}{\sqrt{0.81}} = 150 + \sqrt{0.09}$ , then the value of  $x$  is:

- (A) 137.27                      (B) 131.9                      (C) 135.27                      (D) 127.3                      (E) 139.9

Q2. How much percent of one meter is 5 cm?

- (A) 4%                      (B) 10%                      (C) 5%                      (D) 20%                      (E) 35%

Q3. What is average of 20, 0, 30 and 40?

- (A) 22.5                      (B) 30                      (C) 20                      (D) 40                      (E) 0

Q4. Three men or six boys can complete a work in 8 days. In how many days 4 men and 4 boys will complete the same work?

- (A) 10 days                      (B) 8 days                      (C) 6 days                      (D) 4 days                      (E) 8 days

Q5. How many 5 cm cubes can be obtained (cut-off) from a cube whose edge is 20 cm?






- (A) 60                      (B) 64                      (C) 68                      (D) 72                      (E) 80

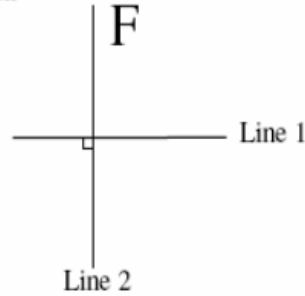
Q6. A man covers a distance of 45 km in 9 hours. If his speed is increased 3 times then in how much time he covers a distance of 60 km?

- (A) 4 hr 10 min                      (B) 5 hr                      (C)  $5\frac{1}{2}$  hr                      (D) 5 hr 40 min                      (E) 4 hr

Q7.

The letter F is reflected in Line 1. The image is then reflected in Line 2. The shape that results is

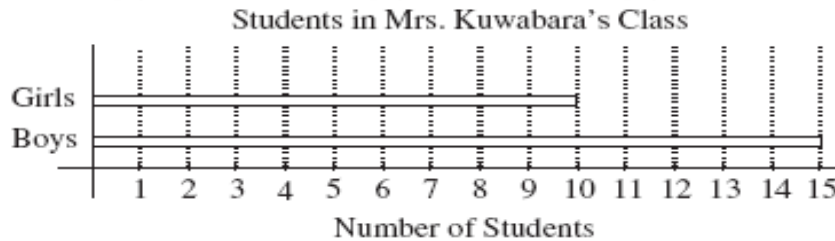
- (A)  (B)  (C)   
 (D)  (E) 



Q8.

The bar graph below shows the numbers of boys and girls in Mrs. Kuwabara's class. The percentage of students in the class who are girls is

- (A) 40% (B) 15% (C) 25% (D) 10% (E) 60%



Q9. 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) can't tell

Q10. The value of  $\frac{40 \times 0.4 \times 0.04}{4 + 4 \div 4}$  is:

- (A) 0.148 (B) 0.15 (C) 0.248 (D) 0.158 (E) 0.128

Q11. What is the probability that a number selected from the numbers 1, 2, 3, ....., 24, 25 is a prime number when each of the given numbers is equally likely to be selected?

- (A)  $\frac{7}{25}$  (B)  $\frac{8}{25}$  (C)  $\frac{9}{25}$  (D)  $\frac{10}{25}$  (E) can't tell

Q12. What percent of 1 hour is 1 minute 12 seconds?

- (A) 1% (B) 2% (C) 3% (D) 4% (E) 5%

Q13. A positive integer x is multiplied by 4. If the product is equal to cube of x, then what will be the value of x?

- (A) 2 (B) 8 (C) 4 (D) 3 (E) 6

Q14. If  $2^{x+3} = 8^2$ , then value of  $x$  is

- (A) 3                      (B) 2                      (C) 1                      (D) 0                      (E) 4

Q15. If  $x * y = \sqrt{x(y+1)}$  then  $2 * 17$  is equal to:

- (A) 6                      (B) 34                      (C) 19                      (D) 15                      (E) 20

### **SECTION-B**

Q16. A towel was 50 cm broad and 100 cm long. When bleached, it was found to have lost 20% of its length and 10% of its breadth. Find the percentage decrease in area.

Q17. Divide  $a^4 - b^4$  by  $a - b$ .

Q18. Find the compound interest at the rate of 10% p.a. for 4 years on the principal which is 4 years at the rate of 4% p.a. gives Rs. 1600 as S.I.

Q19. The barrel of a fountain pen, cylindrical in shape is 7 cm long and 5 mm in diameter. A full barrel of ink in the pen will be used up on writing 330 words on an average. How many words would use up a bottle of ink containing one-fifth of a litre?

Q20. Two dice are thrown simultaneously. Find the probability of getting an even number as the sum.

NOTE: The **Solution Key** of this paper will be available on School's blog [www.crfpsrohini.blogspot.com](http://www.crfpsrohini.blogspot.com) today after 6 pm. The **Result** will be declared on 22 December (Date of Birth of Great Indian Mathematician Ramanujan) and will be available on School's blog.