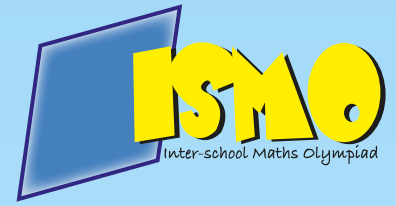




PAKTURK
INTERNATIONAL SCHOOLS & COLLEGES



10th NATIONAL INTER-SCHOOL **MATHS OLYMPIAD**

EXAM BOOKLET FOR CLASS 5

Official Partner



Pakistan Science Foundation



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10th NATIONAL INTER-SCHOOL MATHS OLYMPIAD

INSTRUCTIONS

1. The total time for the Olympiad is 90 minutes. There is no negative marking.
2. There are 50 questions. (Calculator is **not** allowed.)
3. Do not forget to write your name, class and gender on your answer sheet.
4. There is only one correct answer for each question out of given 4 options A, B, C, D. If you mark more than one choice the answer will be considered wrong. Mark your answers on answer sheet; marks on the booklet will not be accepted.
5. Answer sheets will be checked by using the optical reader. Do not fold or use your answer sheet for calculation etc.
6. Before you begin to answer the questions, read them carefully.
7. You may begin your answer from any question; however you must make sure that the number of the question you are answering matches the correct number in the answer sheet.
8. Mark your answer with a lead pencil by filling only the inside of the circles. Do not write or put any other mark on your answer sheet.
9. Speed is important when you answer the questions. If you have difficulty with a question, do not waste your time to solve it, just move on to the next question, You may go back to the 'difficult' question if you still have time after finishing other parts of the Olympiad.
10. The blank pages in the booklet may be used for writing and calculations.
11. Answer key will be uploaded on our website at 7:00 p.m. on 24th November 2014.
12. Results will be announced through our website (www.ismo.pk) on 8th December 2014.

Q1: $\frac{11}{7} + \frac{3}{7} = ?$

- A) 1 B) 2 C) 3 D) 4

Q2: How many zeros are needed to write the numerical for one million?

- A) 3 B) 4 C) 5 D) 6

Q3: Which of the following is the simplest fraction form of 75 percent?

- A)
- $\frac{2}{5}$
- B)
- $\frac{1}{4}$
- C)
- $\frac{3}{5}$
- D)
- $\frac{3}{4}$

Q4: $10 \times 10 + 10 \div 10 = ?$

- A) 11 B) 111 C) 101 D) 20

Q5: $\frac{1}{6} \times \frac{1}{3} + \frac{1}{18} = ?$

- A)
- $\frac{1}{9}$
- B)
- $\frac{1}{3}$
- C)
- $\frac{1}{2}$
- D) 2

Q6: What is the H.C.F of 480 and 516?

- A) 4 B) 12 C) 16 D) 24

Q7: How many Rs. 23 balls can you buy for Rs.713?

- A) 25 B) 27 C) 29 D) 31

Q8: $48 - 12 \times 3 = ?$

- A) 108 B) 96 C) 12 D) 15

Q9: $0.2 \times 0.4 \times 0.8 = ?$

- A) 0.064 B) 0.64 C) 64 D) 640

Q10: What is 20% of $350 \times \frac{1}{7} = ?$

- A) 70 B) 7 C) 1 D) 10

Q11: What is the quotient when 2014×2014 is divided by 2014?

- A) 2014 B) 1 C) 0 D) 2

Q12: Which one of the following fractions is the largest one?

- A) $\frac{7}{8}$ B) $\frac{13}{16}$ C) $\frac{31}{40}$ D) $\frac{63}{80}$

Q13: What is the average of first 5 multiples of 5?

- A) 7.5 B) 37.5 C) 15 D) 35

Q14: Which of the following numbers can be the factors of a prime number?

- A) 1 and 13 B) 1, 2 and 7
C) 1 and 15 D) 1 and 21

Q15: What percent of 0.2 is equal to 0.4?

- A) 400 % B) 200 % C) 100 % D) 150 %

Q16: What number will come instead of ♥ in $2014 - 12 = 14 \times \heartsuit$?

- A) 131 B) 139 C) 141 D) 143

Q17: The square of 4 has the same value as the square root of a number.

Which of the following is the number?

- A) 256 B) 32 C) 16 D) 64

Q18: $3 \times 2014 = 2013 + 2012 + \dots$

Find the missing number.

- A) 2007 B) 2006 C) 2017 D) 2008

Q19: The price of a table is Rs. 1600 and the price of a chair is Rs. 1200.

How much money will be left if you buy 2 tables and 4 chairs with Rs. 9600?

- A) Rs. 1200 B) Rs. 1800
C) Rs. 1600 D) Rs. 1400

Q20: What is the highest common factor of 24 and a number that is a multiple of 24?

- A) 48 B) 36 C) 24 D) 12

Q21: The price of a book is Rs. 2400.

What percent of the price of the book can Usman pay with Rs. 1800?

- A) 75 B) 60 C) 80 D) 72

Q22: Adeel ate 5 slices of cake and Atif ate 7 slices. If there were initially 15 slices of equal size, what fraction of the cake was eaten?

- A) $\frac{5}{4}$ B) $\frac{3}{4}$ C) $\frac{3}{5}$ D) $\frac{4}{5}$

Q23: Which of the following is equal to 4.25?

- A) $\frac{5}{2}$ B) $\frac{7}{4}$ C) $\frac{19}{3}$ D) $\frac{17}{4}$

Q24: Which of the following number should be multiplied by 3.125 to get a natural number?

- A) 4 B) 5 C) 6 D) 8

Q25: ISMO is a four digit number and I, S, M and O are 4 digits.

$$2014 + 2013 + 2012 = \text{ISMO}$$

What is the value of $I+S+M+O$?

- A) 18 B) 14 C) 8 D) 24

Q26: Round off 283 to the nearest ten.

- A) 276 B) 278 C) 280 D) 290

Q27: What is the least common multiple (L.C.M) of first 5 prime numbers?

- A) 44 B) 2 C) 2310 D) 4110

Q28: What is the least common multiple (L.C.M) of denominators of $\frac{1}{3}$, $\frac{1}{5}$, $\frac{1}{4}$, and $\frac{1}{7}$?

- A) 280 B) 420 C) 105 D) 390

Q29: Naseera and Minal have 64 toffees in total, but Minal has 12 more toffees than Naseera.

How many toffees does Naseera have?

- A) 40 B) 26 C) 44 D) 28

Q30: A father bought 22 toys and paid Rs. 1100.

What is the price of one toy?

- A) Rs. 50 B) Rs. 60 C) Rs. 75 D) Rs. 80

Q31: Which one of the following fractions has 7 in denominator when it is reduced to its lowest form?

- A) $\frac{35}{28}$ B) $\frac{28}{35}$ C) $\frac{3}{14}$ D) $\frac{60}{84}$

Q32: What is 20% of 40% of 48000?

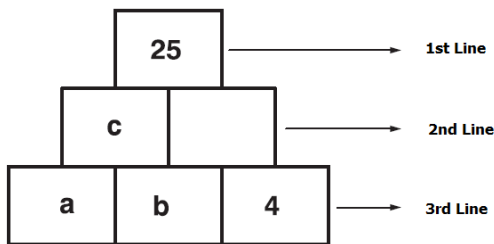
- A) 3972 B) 3840 C) 3800 D) 3755

Q33: A student in class eight scored 72 marks in maths test. How much should she score in order to increase her average to 80?

- A) 88 B) 90 C) 80 D) 84

Q34: The sum of any two adjacent numbers is equal to the number on them.

For example: $a+b=c$



What is the value of "a" if the sum of numbers in 3rd line is equal to 17?

- A) 4 B) 5 C) 6 D) 7

Q35: The price of an item is Rs. 1200. The shopkeeper wants to sell 5 items for Rs. 9000. How much should the shopkeeper increase the price of the item?

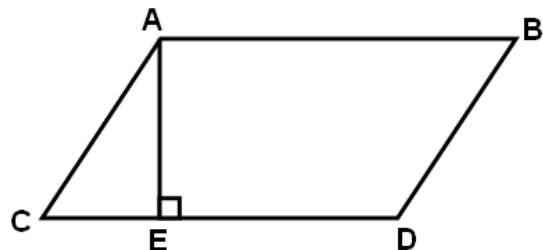
- A) Rs. 600 B) Rs. 700
C) Rs. 800 D) Rs. 900

Q36: A boy selected five numbers as 78, 66, 64, 96,86 and noticed that one of the number is the average of other four numbers.

What is that number?

- A) 64 B) 66 C) 78 D) 86

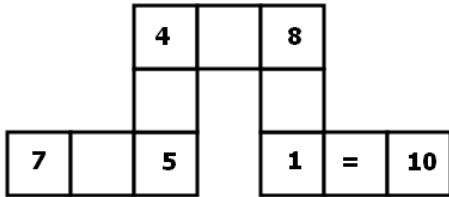
Q37: ABCD is a parallelogram and the length of AE is half of the length of CD.



What is area of parallelogram if the length of AB is 12 cm?

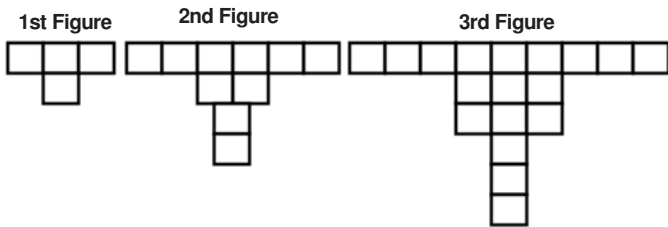
- A) 96 cm^2 B) 72 cm^2
C) 64 cm^2 D) 84 cm^2

Q38: Which four operation sign should be used in order to get 10?



- A) +, -, +, ×
- B) +, -, +, ÷
- C) -, ×, +, ÷
- D) +, ÷, +, -

Q39: How many squares will be used in 7th figure?



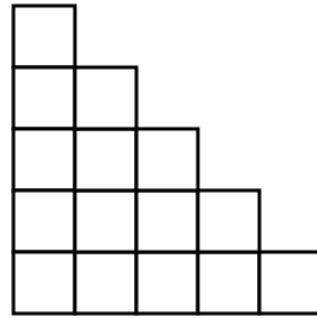
- A) 40
- B) 70
- C) 80
- D) 100

Q40: The prime factorization of 12600 is found wrong by a student as $2^3 \times 3^2 \times 5 \times 7$.

What is the missing number in above prime factorization?

- A) 2
- B) 3
- C) 5
- D) 7

Q41: How many squares are there in the figure?



- A) 15
- B) 17
- C) 19
- D) 22

Q42: Mohseen has 1600 marbles. Half of them are blue, one quarter are red, and one eighth are green.

What percent of the marbles are of some other colour?

- A) %10
- B) %12
- C) %12.5
- D) %15

Q43: A number is multiplied by itself, added 1, the result is multiplied by 10, added 3, and the result is multiplied by 4. What is the number if the final answer is 2012?

- A) 9
- B) 8
- C) 7
- D) 6

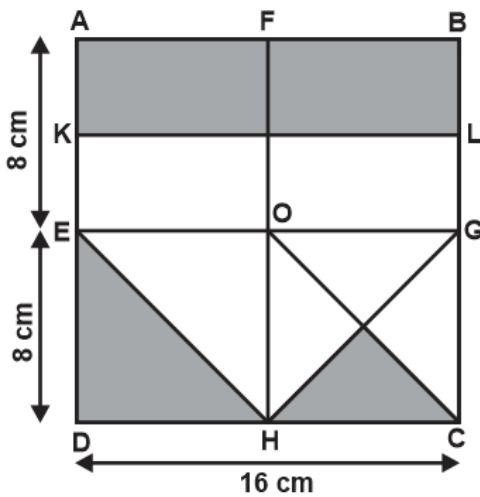
Q44: The average of twelve numbers is 45. The average of ten numbers when two numbers removed is 48.

What is the average of those two numbers which are removed?

- A) 30 B) 32 C) 44 D) 48

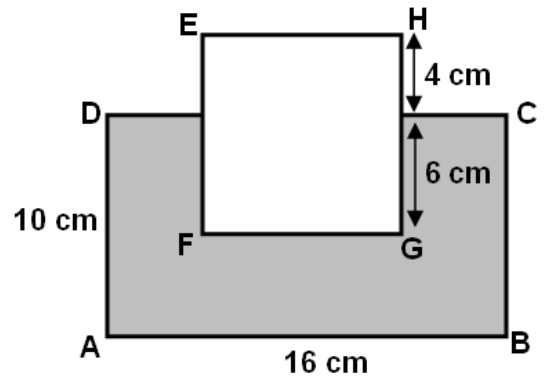
Q45: In the following diagram $AF=BF$, $BG=GC$, $AK=KE$ and $BL=LG$.

What is the total area of shaded regions?



- A) 100 cm^2 B) 112 cm^2
 C) 108 cm^2 D) 148 cm^2

Q46: ABCD is a rectangle and EFGH is a square.



What is the perimeter of shaded region?

- A) 58 cm B) 60 cm
 C) 62 cm D) 64 cm

Q47: The rent of a building increases in a sequence as follow.

Year	Rent
2012	Rs. 12000
2013	Rs. 15000
2014	Rs. 19000
2015	Rs. 24000

What will be the rent in 2023?

- A) Rs. 90000 B) Rs. 100000
 C) Rs. 105000 D) Rs. 120000

Q48: What is the sum of digits of 111111×111111 according to the rule below?

$$1 \times 1 = 1$$

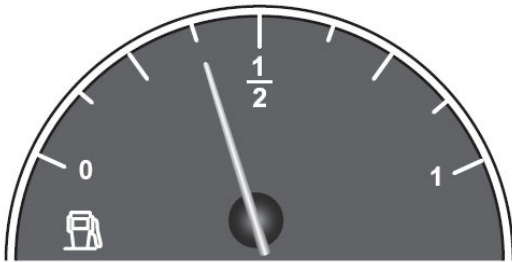
$$11 \times 11 = 121$$

$$111 \times 111 = 12321$$

$$1111 \times 1111 = 1234321$$

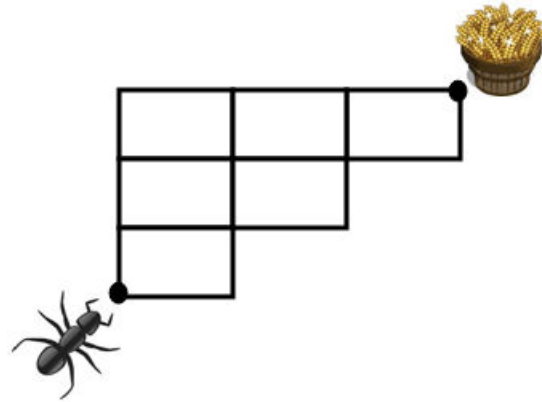
- A) 12 B) 18 C) 24 D) 36

Q49: The tank of a car has 23.4 litre petrol when the pointer (arrow) is as in the figure. The tank is empty when the pointer shows 0. What is the capacity of the tank?



- A) 62 B) 62.4 C) 64.8 D) 72.4

Q50: In how many ways the ant can reach the wheat by moving up and right only?



- A) 10 B) 11 C) 12 D) 13