Math Olympiad Practice

GRADE 5 | ORIGINAL MOCK TEST 01

Think carefully. Choose one answer.

50 questions / 60 minutes / 60 marks

Name: _____

Date: _____

Logical Reasoning	1-15	15 x 1 = 15
Mathematical Reasoning	16-35	20 x 1 = 20
Everyday Mathematics	36-45	10 x 1 = 10
Achievers Section	46-50	5 x 3 = 15

Circle A, B, C or D for each question.

Each question has only one correct answer.

There is no negative marking. Do not use a calculator.

For parents: Let your child attempt the paper independently. Start the timer after reading these instructions.

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Logical Reasoning

Questions 1-5 | 1 mark each

1. Find the next number: 7, 15, 31, 63, ___.

A. 95 B. 126 C. 127 D. 128

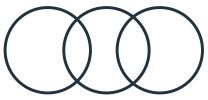
2. In a code, FROG is written as GQPF and TENT is written as UDOS. How is LAMP written?

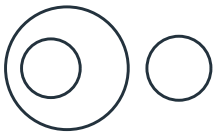
A. MZNO B. KBNQ C. MZMQ D. MBNO

3. In a row, Dev is seventh from the left and Tara is ninth from the right. Tara is to the right of Dev, with five children between them. How many children are in the row?

A. 20 B. 23 C. 22 D. 21

4. Which diagram shows the relationship between Squares, Rectangles and Triangles? Each circle represents one of these groups.

A. 

B. 

C. 

D. 

5. Which option is the mirror image of the complete flag-and-dot figure? The vertical line is the mirror.



A. 

B. 

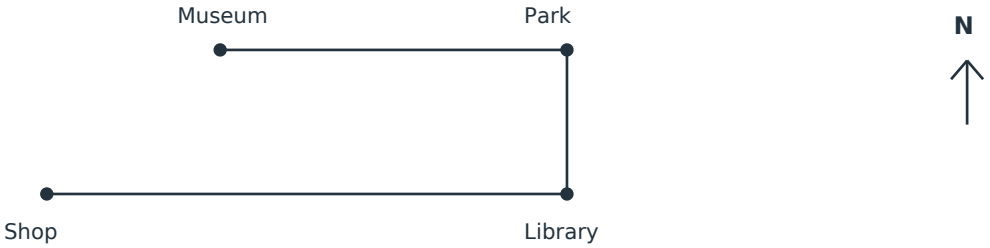
C. 

D. 

Logical Reasoning

Questions 6-10 | 1 mark each

6. The route is shown below. North is at the top. In which direction is the Museum from the Library?



A. North-east B. South-west C. West D. North-west

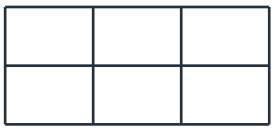
7. Remove all digits from this arrangement:
B 4 M R 7 A T 2 K L 9 P S D
Which letter is third to the left of the sixth letter from the right?

A. R B. M C. A D. T

8. A 31-day month begins on a Wednesday. A workshop is held 12 days after the third Friday of that month. On which date and day is the workshop?

A. 28th, Tuesday B. 30th, Thursday C. 29th, Wednesday D. 31st, Friday

9. How many rectangles of all sizes are there in this grid? Include squares in your count.



A. 18 B. 12 C. 15 D. 6

10. P is turned without flipping it. Which other figure can be obtained by turning P through 2 3/4 complete turns clockwise?



A. None of these B. R C. S D. Q

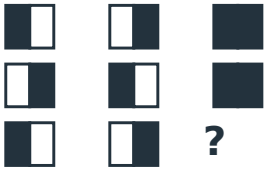
Logical Reasoning

Questions 11-15 | 1 mark each

11. Four children have different scores. Nila scores more than Jai but less than Sara. Omar scores less than Jai. Which order is correct, from highest to lowest?

A. Sara, Jai, Nila, Omar
B. Nila, Sara, Jai, Omar
C. Omar, Jai, Nila, Sara
D. Sara, Nila, Jai, Omar

12. In each row, the third tile shows every half that is dark in either of the first two tiles. Which tile should replace the question mark?



Each small tile has two halves.

A. Both halves dark
B. Right half dark only
C. Left half dark only
D. Neither half dark

13. In each pair, the same rule changes the first number to the second: 6 → 42; 9 → 90; 12 → 156. What does 15 change to?

A. 210
B. 240
C. 225
D. 255

14. Arrange these words in dictionary order:
P: Painter; Q: Painting; R: Painted; S: Paint.
Which order is correct?

A. P, R, Q, S
B. S, P, R, Q
C. R, P, S, Q
D. S, R, P, Q

15. A box contains cards numbered 1 to 20. A card is selected. Its number is even, greater than 10 and not a multiple of 3. How many numbers fit all three clues?

A. 2
B. 5
C. 4
D. 3

Mathematical Reasoning

Questions 16-20 | 1 mark each

16. Which is the correct international number name for 3,08,04,025?

A. Three hundred eight million four thousand twenty-five

B. Three million eight hundred four thousand twenty-five

C. Thirty million eighty-four thousand twenty-five

D. Thirty million eight hundred four thousand twenty-five

17. In 7,24,77,718, the place value of the 7 in the thousands place is how many times the place value of the 7 in the hundreds place?

A. 100 B. 10 C. 1000 D. 10000

18. Round EACH number to the nearest thousand, then subtract: 8,74,620 - 3,26,480. What is the estimated difference?

A. 5,47,000 B. 5,48,000 C. 5,49,000 D. 5,50,000

19. Which Roman numeral represents (CM - CCXL) ÷ III?

A. CLXXX B. CCX C. CCXX D. CCXL

20. Two ribbons are 84 cm and 126 cm long. They are cut into equal pieces of the greatest possible length, with no ribbon left over. How many pieces are obtained altogether?

A. 3 B. 10 C. 7 D. 5

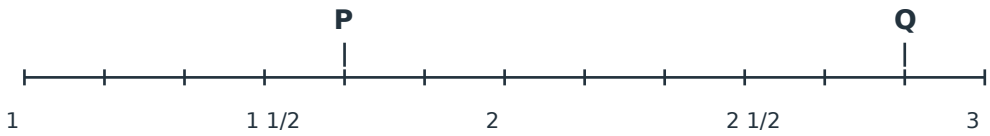
Mathematical Reasoning

Questions 21-25 | 1 mark each

21. Which is the smallest three-digit number divisible by both 12 and 18?

A. 108 B. 102 C. 120 D. 144

22. Every small interval on the number line has the same length.
What is Q - P?



A. 5/6 B. 1 1/2 C. 7/6 D. 1 5/6

23. A container is 5/6 full. Water equal to 1/4 of its FULL capacity is removed. What fraction of the container is now full?

A. 3/4 B. 5/8 C. 2/3 D. 7/12

24. What is the value of 6.4 ÷ 0.8 + 2.5 × 1.2?

A. 11 B. 10.4 C. 9.6 D. 12.6

25. A number is 3.06 more than 5.78. Round the number to the nearest tenth. What do you get?

A. 8.8 B. 8.9 C. 9.0 D. 8.84

Mathematical Reasoning

Questions 26-30 | 1 mark each

26. The product of a number and 48 is 16,272. What is the sum of that number and 125?

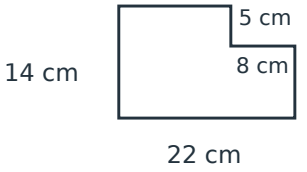
A. 464 B. 364 C. 454 D. 339

27. The three angles are labelled P, Q and R. Which order lists them from smallest to largest?



A. P, Q, R B. R, P, Q C. P, R, Q D. Q, R, P

28. An 8 cm by 5 cm corner is removed from a 22 cm by 14 cm rectangle. Find the area of the remaining shape.



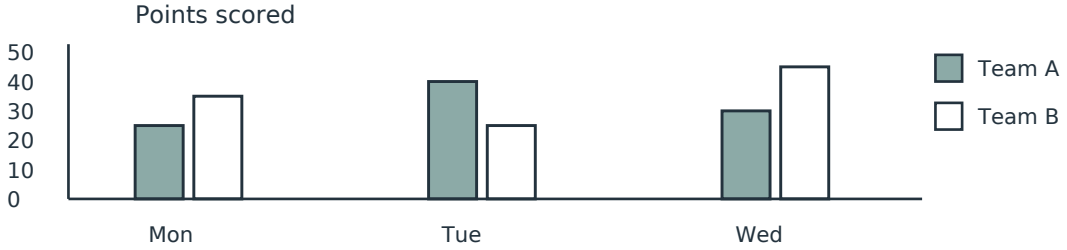
Not drawn to scale

A. 228 cm² B. 268 cm² C. 282 cm² D. 308 cm²

29. A rectangle has area 216 cm² and width 12 cm. A square has the SAME perimeter as the rectangle. What is the area of the square?

A. 144 cm² B. 196 cm² C. 225 cm² D. 256 cm²

30. The graph shows the teams' points over three days. By how many points does Team B's TOTAL exceed Team A's total?



A. 5 B. 10 C. 15 D. 20

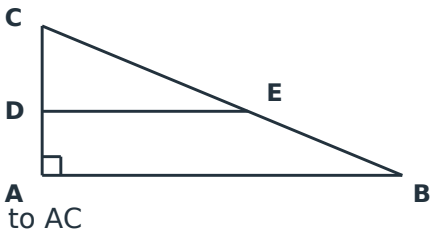
Mathematical Reasoning

Questions 31-35 | 1 mark each

31. If 3/5 of a number is 54, what is 7/10 of the same number?

A. 54 B. 90 C. 72 D. 63

32. In the diagram, DE is parallel to AB. Which statement must be true?



DE is parallel to AB.

A. AB is parallel to AC

B. DE is parallel to AC

C. DE is perpendicular to AC

D. BC is perpendicular to AB

33. A rectangular sheet has a centred rectangular hole cut out. The hole's sides are parallel to the sheet's sides. Neither rectangle is a square. How many lines of symmetry does the remaining shape have?

A. 2 B. 1 C. 0 D. 4

34. The pictograph shows monthly visitor numbers. For how many months was the number ABOVE the average for these four months?

May	○ ○ ○ ○
June	○ ○ ○ ○ ○ ○
July	○ ○ ○ ○ ○
August	○ ○ ○ ○ ○ ○ ○

Each circle = 30 visitors

A. 2 B. 1 C. 3 D. 4

35. Which statement is FALSE?

A. Every prime number greater than 2 is odd.

B. The sum of two prime numbers is always even.

C. Every common factor of 18 and 30 is a factor of 6.

D. 1 is neither prime nor composite.

Everyday Mathematics

Questions 36-40 | 1 mark each

36. A relief centre receives 36 cartons with 125 food packets in each. It distributes 275 packets daily for 12 days. How many packets remain?

A. 1100 B. 1200 C. 1300 D. 1500

37. Four bags each contain 2.75 kg of rice. After 3 kg 600 g is used, the rest is packed equally into 8 containers. How much rice is in each container?

A. 925 g B. 900 g C. 825 g D. 975 g

38. A parent buys 3 sketchbooks and 2 boxes of crayons at the prices shown. She pays Rs 500. How much change should she receive?

Item	Price
One sketchbook	Rs 46.75
One box of crayons	Rs 82.50

A. Rs 204.75 B. Rs 194.75 C. Rs 214.75 D. Rs 224.75

39. A 17.4 m wire is used to make identical square frames, each with a side of 0.6 m. What is the greatest number of complete frames that can be made, and how much wire remains?

A. 7 frames; 1.2 m B. 7 frames; 0.6 m C. 8 frames; 0.6 m D. 6 frames; 3 m

40. A 15 L dispenser is 4/5 full. Children fill 18 cups with 350 mL each. How much juice is left in the dispenser?

A. 5 L 700 mL B. 5 L 300 mL C. 6 L 300 mL D. 8 L 700 mL

Everyday Mathematics

Questions 41-45 | 1 mark each

41. A batch of biscuits needs 2/3 kg of flour. A baker has 5 1/2 kg. After making 6 batches, how much flour remains?

A. 1 1/6 kg B. 1 1/3 kg C. 2 1/2 kg D. 1 1/2 kg

42. The clocks show an overnight bus journey. The journey includes a 35-minute stop. For how long was the bus MOVING?



Departure (night)



Arrival (next morning)

A. 7 hours

B. 6 hours 35 minutes

C. 7 hours 35 minutes

D. 8 hours 10 minutes

43. At noon, the temperature is 31°C. Over the next 3 hours it falls by 2°C each hour. It then rises by 4°C. What is the final temperature?

A. 25°C B. 27°C C. 29°C D. 33°C

44. Six identical packs, each containing 8 erasers, cost Rs 216 altogether. How much will 20 erasers cost at the same price per eraser?

A. Rs 72 B. Rs 90 C. Rs 108 D. Rs 120

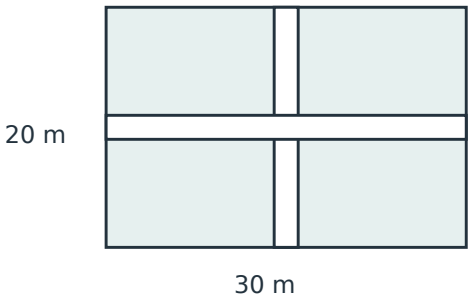
45. A gardener plants flowers in 18 rows of 24. One-sixth of all flowers are yellow, and 3/8 are red. The rest are white. How many flowers are white?

A. 162 B. 180 C. 198 D. 216

Achievers Section

Questions 46-48 | 3 marks each

46. A 30 m by 20 m lawn has two straight paths crossing as shown. Both paths extend from one edge to the opposite edge. The rest is covered with grass at Rs 12.50 per square metre. What is the cost of covering the grass area?



Both paths are 2 m wide.

Paths cross at right angles.

Not drawn to scale.

A. Rs 6250 B. Rs 6500 C. Rs 6300 D. Rs 7500

47. Meera puts aside 1/4 of her money as savings. She spends 2/5 of the remaining money on a craft kit. Then she spends 4/7 of what is left in her purse on books. She now has Rs 81 in her purse, apart from her savings. How much money did she have at first?

A. Rs 315 B. Rs 378 C. Rs 420 D. Rs 504

48. A six-digit number uses each of 0, 1, 2, 4, 6 and 8 exactly once. It is divisible by 5. Its first three digits form the greatest possible three-digit number. Of the remaining digits, the hundreds digit is smaller than the tens digit. What is the difference between this number and 8,60,000?

A. 4120 B. 4100 C. 4210 D. 4610

Achievers Section

Questions 49-50 | 3 marks each

49. P, Q and R stand for digits in this division. Each letter has a different value. Find (Q × R) - P.

Quotient: 4P **Divisor: 37**

Dividend: 1Q7R **Remainder: 9**

A. 24 B. 19 C. 25 D. 29

50. There are 100 children in these three schools altogether. Each child pays the cost shown for a trip. One-sixth of Pine's children cancel and receive a full refund. All the others attend. Find the number who attend AND the total amount kept after refunds.

School	Children	Cost per child
Oak	?	Rs 45
Pine	36	Rs 60
Maple	24	Rs 75

A. 94 children; Rs 5580

B. 94 children; Rs 5760

C. 90 children; Rs 5400

D. 94 children; Rs 5400