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ADIRA ENTRANCE TEST

MATHEMATICS SAMPLE QUESTION PAPER

Entrance Test 2026–27 • Academic Year 2027–28

SECTION	FORMAT	MARKS	DURATION	PURPOSE
Mathematics	Sections A–C, short answer + MCQ	40	45 minutes	Practice only

DISCLAIMER This sample paper is intended for practice purposes only. The format, question types, and difficulty level of questions in the actual admissions assessment may vary.

QUESTIONS

Section A — *10 marks. Answer all questions.*

Q1. In the number 7,48,325, what is the place value of 8? *(1 mark)*

(A) 8 **(B)** 8,000 **(C)** 80,000 **(D)** 8,00,000

Q2. Round 46,738 to the nearest thousand. *(1 mark)*

Q3. Find 245 × 36. *(1 mark)*

Q4. A farm packs 1,000 eggs into trays of 30. How many trays are completely filled, and how many eggs are left over? *(1 mark)*

Q5. Which fraction is equal to $\frac{3}{4}$? *(1 mark)*

(A) $\frac{6}{10}$ **(B)** $\frac{9}{12}$ **(C)** $\frac{12}{15}$ **(D)** $\frac{15}{24}$

Q6. Arrange in ascending order: $\frac{2}{3}$, $\frac{3}{5}$, $\frac{5}{8}$. *(1 mark)*

Q7. Riya had ₹450. She spent $\frac{2}{5}$ of it on books. How much money does she have left? *(1 mark)*

Q8. Aman buys a pen for ₹12.75 and a notebook for ₹8.50. He pays with a ₹50 note. How much change does he get? *(1 mark)*

Q9. Subtract: 3 kg 250 g − 1 kg 800 g. *(1 mark)*

Q10. A rectangular garden is 12 m long and 8 m wide. A square plot has the same perimeter as the garden. What is the side of the square plot? *(1 mark)*

Section B — *14 marks. Show your working.*

Q11. At 6 a.m. the temperature in a hill town was −4 °C. By noon it had risen by 9 °C. What was the temperature at noon? *(1 mark)*

Q12. Which of these is a prime number? *(1 mark)*

(A) 51 **(B)** 57 **(C)** 59 **(D)** 91

Q13. Two school bells ring every 12 minutes and every 18 minutes. They ring together at 9:00 a.m. After how many minutes will they next ring together? *(2 marks)*

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Q14. The number 4__72 is divisible by 9. Find the missing digit. *(2 marks)*

Q15. Simplify: $2\frac{1}{3} + 1\frac{3}{4} - \frac{5}{6}$. Give your answer as a mixed number. *(3 marks)*

Q16. 5 notebooks cost ₹135. What is the cost of 8 notebooks? *(2 marks)*

Q17. A room is 6 m long and 4 m wide. Its floor is covered with square tiles of side 50 cm. How many tiles are needed? *(3 marks)*

Section C — *16 marks. Show your working.*

Q18. Evaluate: $(-36) \div (-4) \times (-3) + 5$. *(2 marks)*

Q19. A ribbon $3\frac{3}{4}$ m long is cut into pieces, each $\frac{5}{8}$ m long. How many pieces are there? *(2 marks)*

Q20. Three times a number, decreased by 7, equals 23. *(2 marks)*

(a) Write this as an equation.

(b) Solve it to find the number.

Q21. Simplify: $3(2x - 5) - 2(x - 4)$. *(2 marks)*

Q22. A bicycle costs ₹800. Its price is increased by 15%. A shop then gives a 10% discount on the new price. What is the final price? *(2 marks)*

Q23. Divide ₹1,200 between Asha and Bilal in the ratio 3 : 5. *(1 mark)*

Q24. The marks of five students are 8, 12, 15, 9 and 21. *(2 marks)*

(a) Find the mean.

(b) Find the median.

Q25. The length of a rectangle is 5 cm more than its breadth. Its perimeter is 58 cm. *(3 marks)*

(a) Taking the breadth as b cm, write an equation for the perimeter.

(b) Find the length and breadth.

(c) Find the area of the rectangle.

End of test.

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ANSWER KEY

For multi-mark questions, award marks for each step shown. Accept equivalent correct methods.

Q1. Answer: (B) 8,000.

Q2. Answer: 47,000.

Q3. Answer: 8,820.

Q4. Answer: 33 trays are completely filled; 10 eggs are left over.

Q5. Answer: (B) $\frac{9}{12}$.

Q6. Answer: $\frac{3}{5}$, $\frac{5}{8}$, $\frac{2}{3}$.

Q7. Answer: ₹270.

Q8. Answer: ₹28.75.

Q9. Answer: 1 kg 450 g.

Q10. Answer: 10 m.

Q11. Answer: 5 °C.

Q12. Answer: (C) 59.

Q13. Answer: 36 minutes (at 9:36 a.m.).

Correct method: LCM of 12 and 18 by listing multiples or prime factors	**1 mark**
LCM = 36, so 36 minutes	**1 mark**

Q14. Answer: 5.

Digit sum 4 + 7 + 2 + □ = 13 + □ must be a multiple of 9	**1 mark**
Missing digit = 5	**1 mark**

Q15. Answer: $3\frac{1}{4}$.

Converts to improper fractions: $\frac{7}{3} + \frac{7}{4} - \frac{5}{6}$	**1 mark**
Common denominator: $\frac{28}{12} + \frac{21}{12} - \frac{10}{12} = \frac{39}{12}$	**1 mark**
Simplifies to $3\frac{1}{4}$	**1 mark**

Q16. Answer: ₹216.

Cost of 1 notebook = 135 ÷ 5 = ₹27	**1 mark**
Cost of 8 notebooks = 27 × 8 = ₹216	**1 mark**

Q17. Answer: 96 tiles.

Converts units: room = 600 cm × 400 cm = 2,40,000 cm² (or 24 m²)	**1 mark**
Area of one tile = 50 × 50 = 2,500 cm² (or 0.25 m²)	**1 mark**
Number of tiles = 2,40,000 ÷ 2,500 = 96	**1 mark**

Q18. Answer: −22.

(−36) ÷ (−4) = 9, then 9 × (−3) = −27 (left to right)	**1 mark**
−27 + 5 = −22	**1 mark**

Q19. Answer: 6 pieces.

$\frac{15}{4} \div \frac{5}{8} = \frac{15}{4} \times \frac{8}{5}$	**1 mark**
= 6 pieces	**1 mark**

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Q20. Answer: (a) $3x - 7 = 23$ (b) $x = 10$.

(a) Correct equation $3x - 7 = 23$ — **1 mark**
(b) $3x = 30$, so $x = 10$ — **1 mark**

Q21. Answer: $4x - 7$.

Expands correctly: $6x - 15 - 2x + 8$ — **1 mark**
Collects like terms: $4x - 7$ — **1 mark**

Q22. Answer: ₹828.

Price after 15% increase = 800 × 1.15 = ₹920 — **1 mark**
Price after 10% discount = 920 × 0.90 = ₹828 — **1 mark**

Q23. Answer: Asha ₹450, Bilal ₹750.

Q24. Answer: (a) Mean = 13 (b) Median = 12.

(a) Sum = 65; 65 ÷ 5 = 13 — **1 mark**
(b) Ordered: 8, 9, 12, 15, 21; middle value = 12 — **1 mark**

Q25. Answer: (a) $2(b + 5) + 2b = 58$ (b) breadth 12 cm, length 17 cm (c) 204 cm².

(a) Correct equation: $2(b + 5) + 2b = 58$, i.e. $4b + 10 = 58$ — **1 mark**
(b) $b = 12$, so breadth = 12 cm and length = 17 cm — **1 mark**
(c) Area = 17 × 12 = 204 cm² — **1 mark**

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