CTET Mathematics Practice Test

Paper I (For Classes I–V)

General Instructions

Practice Test - 04

1. This paper contains a total of **30 questions**.
2. All questions are **compulsory**.
3. Each question carries **1 mark**.
4. There is **no negative marking**.
5. The maximum marks for this test are **30**.
6. The total duration of the test is **45 minutes**.
7. Choose the most appropriate answer from the given options.
8. Use of calculators, mobile phones, or any electronic devices is **not permitted**.
9. Rough work may be done on the space provided at the end of the paper.
10. Read each question carefully before answering.

All the Best!

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1. A rectangular field has its length and breadth in the ratio 5:3. If the perimeter is 96 meters, what is the area of the field?

   (a) 540 m^2

   (b) 480 m^2

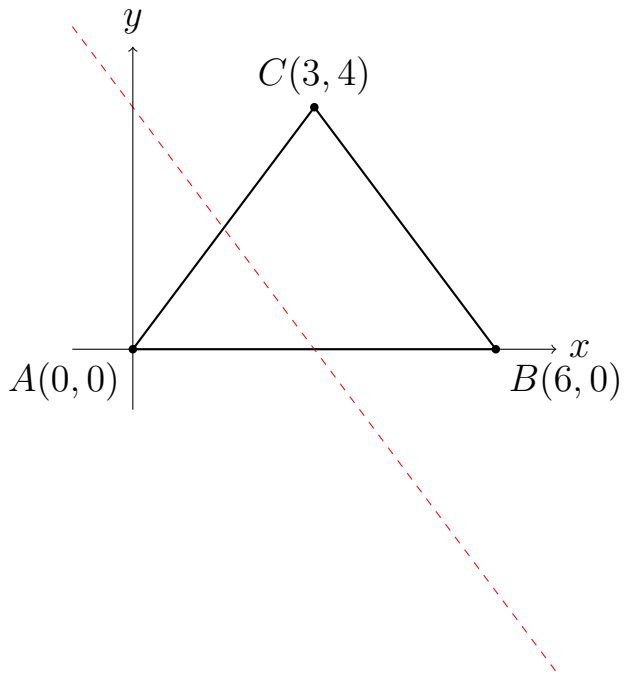
   (c) 360 m^2

   (d) 420 m^2

2. Which approach is most effective for helping students overcome fear of mathematics?

   (a) Giving more difficult problems
   (b) Using games and real-life contexts
   (c) Emphasizing speed and accuracy
   (d) Focusing on procedural methods

3. In triangle ABC with vertices A(0,0), B(6,0), and C(3,4), a line parallel to BC passes through the midpoint of AB. What are the coordinates where this line intersects AC?



   (a) (1.5,2)
   (b) (2,2.5)
   (c) (1,1.33)
   (d) (2.5,3.33)

4. If $\frac{4}{7}$ of a number is 84, what is $\frac{5}{8}$ of the same number?

   (a) 92.5
   (b) 95.5
   (c) 97.5
   (d) 102.5

5. A teacher wants to introduce the concept of area to Class III students. Which activity would be most appropriate?

(a) Memorizing area formulas

(b) Counting square units on grid paper

(c) Solving word problems

(d) Drawing shapes on board

6. The sum of three consecutive multiples of 7 is 126. What is the largest number?

   (a) 35

   (b) 42

   (c) 49

   (d) 56

7. A circle has center O(0,0) and passes through point P(8,6). What is the length of the diameter?

   (a) 10 units

   (b) 15 units

   (c) 20 units

   (d) 25 units

8. A student struggles with understanding place value in subtraction with regrouping. What teaching aid would be most helpful?

   (a) Number chart

   (b) Base-ten blocks

   (c) Multiplication table

   (d) Fraction circles

9. The diagonal of a square is $10\sqrt{2}\,\text{cm}$. What is its perimeter?

   (a) 20 cm

   (b) 30 cm

   (c) 40 cm

   (d) 50 cm

10. Identify the pattern: 2, 5, 11, 23, 47, ?

    (a) 85

    (b) 89

    (c) 95

(d) 97

11. How many small cubes of edge 2 cm can be packed in a cuboidal box of dimensions 12 cm $\times$ 8 cm $\times$ 6 cm?

    (a) 36

    (b) 48

    (c) 64

    (d) 72

12. For teaching the concept of fractions, which method promotes deepest understanding?

    (a) Memorizing fraction rules

    (b) Using fraction walls and circular models

    (c) Solving many problems

    (d) Writing fractions in notebooks

13. The LCM of two numbers is 120 and their HCF is 10. If one number is 30, what is the other number?

    (a) 40

    (b) 50

    (c) 60

    (d) 70

14. In a pie chart representing favorite sports, the angle for cricket is 120°. If 60 students prefer cricket, how many students were surveyed in total?

    (a) 120

    (b) 150

    (c) 180

    (d) 200

15. A triangle has angles measuring (2x+10)°, (3x-20)°, and (x+40)°. What type of triangle is it?

    (a) Acute angled

    (b) Right angled

    (c) Obtuse angled

(d) Equilateral

16. When students work in groups to solve mathematical problems, it primarily helps in developing:

    (a) Rote memorization

    (b) Communication and reasoning skills

    (c) Speed in calculations

    (d) Individual competition

17. A car travels 180 km in 3 hours. How long will it take to cover 240 km at the same speed?

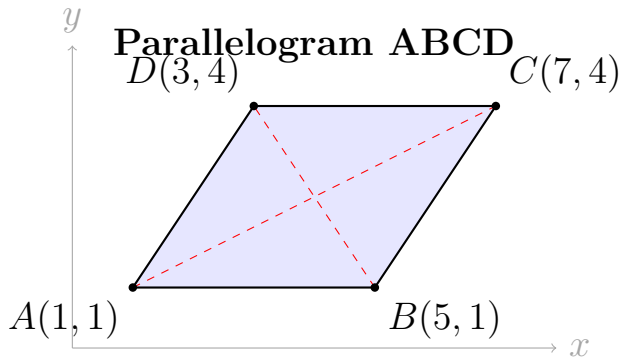
    (a) 3.5 hours

    (b) 4 hours

    (c) 4.5 hours

    (d) 5 hours

18. The vertices of a parallelogram are A(1,1), B(5,1), C(7,4), D(3,4). What is its area?



    (a) 12 square units

    (b) 15 square units

    (c) 18 square units

    (d) 20 square units

19. A student claims that "zero is the smallest number." How should the teacher respond?

    (a) Correct the student immediately

    (b) Discuss negative numbers using number line

    (c) Ask to memorize number system

(d) Ignore the misconception

20. Find the smallest number which when increased by 5 is divisible by 12, 18, and 24.

    (a) 67

    (b) 71

    (c) 75

    (d) 79

21. In a bar graph, the bar representing mathematics marks is 6.5 cm tall. If the scale is 2 cm = 20 marks, what are the mathematics marks?

    (a) 55

    (b) 60

    (c) 65

    (d) 70

22. Which teaching strategy is most effective for visual learners in mathematics?

    (a) Long lectures

    (b) Written assignments

    (c) Diagrams and visual aids

    (d) Oral explanations

23. A trader bought 50 kg of rice at Rs.40 per kg and sold it at Rs.48 per kg. What is his profit percentage?

    (a) 15%

    (b) 18%

    (c) 20%

    (d) 25%

24. The perimeter of a regular pentagon is 65 cm. What is the length of each side?

    (a) 11 cm

    (b) 12 cm

    (c) 13 cm

    (d) 14 cm

25. For developing spatial reasoning in Class II students, which activity is most appropriate?

    (a) Solving algebra problems

    (b) Building with blocks and shapes

    (c) Memorizing geometric formulas

    (d) Writing number names

26. If 12.5% of a number is 25, what is 37.5% of the same number?

    (a) 65

    (b) 70

    (c) 75

    (d) 80

27. A cone has radius 7 cm and height 12 cm. What is its volume? (Use $\pi = \frac{22}{7}$)

    (a) $564\,\text{cm}^3$

    (b) $588\,\text{cm}^3$

    (c) $616\,\text{cm}^3$

    (d) $642\,\text{cm}^3$

28. Using manipulatives like geoboards for teaching geometry helps students primarily in:

    (a) Memorizing theorems

    (b) Developing spatial visualization

    (c) Solving written problems

    (d) Learning definitions

29. Simplify: 15.75 - 8.25 + 12.50

    (a) 19.00

    (b) 19.50

    (c) 20.00

    (d) 20.50

30. In a class, the ratio of students who like science to those who like mathematics is 4:3. If 28 students like science, how many students like mathematics?

(a) 18
(b) 20
(c) 21
(d) 24