# CTET Mathematics Practice Test

**Paper I (For Classes I–V)**

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## General Instructions

## Practice Test - 07

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.

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## All the Best!

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1. A rectangular park has length 25 m and breadth 18 m. A path of width 2 m runs around it inside the park. What is the area of the path?

   (a) 148 $m^2$

   (b) 156 $m^2$

   (c) 164 $m^2$

   (d) 172 $m^2$

2. Which teaching method is most effective for helping students understand the concept of equivalent fractions?

   (a) Memorizing fraction pairs

   (b) Using fraction strips or circles

   (c) Solving textbook exercises

   (d) Writing fractions repeatedly

3. In triangle PQR with vertices P(0,0), Q(8,0), and R(4,6), a line parallel to PQ passes through point S(2,3). What fraction of the triangle's area lies above this line?

   (a) $\frac{1}{4}$

   (b) $\frac{1}{2}$

   (c) $\frac{3}{4}$

   (d) $\frac{2}{3}$

4. If 30% of a number is 45, what is 70% of the same number?

   (a) 95

   (b) 100

   (c) 105

   (d) 110

5. A teacher wants to introduce the concept of volume to Class IV students. Which activity would be most appropriate initially?

   (a) Memorizing volume formulas

   (b) Filling containers with unit cubes

   (c) Solving word problems

   (d) Drawing 3D shapes

6. The product of two consecutive even numbers is 288. What is the sum of these numbers?

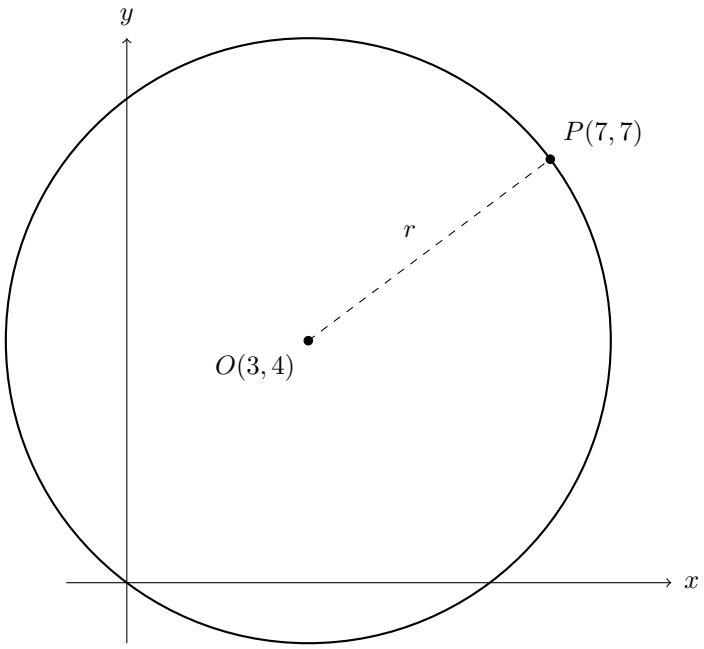
   (a) 32

   (b) 34

   (c) 36

(d) 38

7. A circle has center at (3,4) and passes through point (7,7). What is the length of its radius?




(a) 3 units

(b) 4 units

(c) 5 units

(d) 6 units

8. A student consistently writes 507 as "5007" in place value. What is the most likely reason for this error?

(a) Lack of understanding of zero as placeholder

(b) Poor handwriting

(c) Carelessness

(d) Difficulty in reading

9. The area of a rhombus is 96 $cm^2$ and one diagonal is 12 cm. What is the length of the other diagonal?

(a) 14 cm

(b) 16 cm

(c) 18 cm

(d) 20 cm

10. Find the next number in the pattern: 1, 4, 9, 16, 25, 36, ?

(a) 47

(b) 48

(c) 49

(d) 50

11. How many cubes of side 3 cm can be packed in a cuboidal box of dimensions 15 cm $\times$ 12 cm $\times$ 9 cm?

    (a) 40

    (b) 50

    (c) 60

    (d) 70

12. When teaching measurement of angles, which tool is most appropriate for hands-on learning?

    (a) Printed worksheets

    (b) Protractor and drawn angles

    (c) Textbook diagrams

    (d) Memorizing angle types

13. The HCF of two numbers is 15 and their LCM is 180. If one number is 45, what is the other number?

    (a) 50

    (b) 55

    (c) 60

    (d) 65

14. In a pictograph, each symbol represents 4 students. If 7.5 symbols are used to represent a particular data, how many students does it represent?

    (a) 28

    (b) 30

    (c) 32

    (d) 34

15. A triangle has sides measuring 8 cm, 15 cm, and 17 cm. What is the area of the triangle?

(a) 50 $cm^2$

(b) 55 $cm^2$

(c) 60 $cm^2$

(d) 65 $cm^2$

16. Which assessment strategy is most effective for identifying students' mathematical misconceptions?

(a) Multiple choice tests only

(b) Oral explanations and interviews

(c) Written examinations

(d) Group projects

17. A bus covers 240 km in 4 hours. How long will it take to cover 420 km at the same speed?

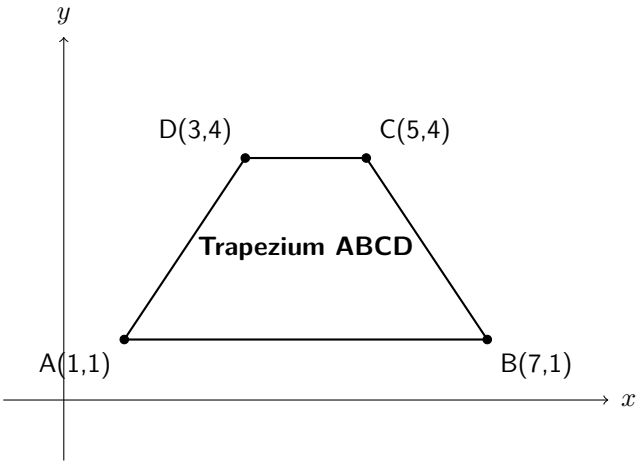
(a) 6 hours

(b) 6.5 hours

(c) 7 hours

(d) 7.5 hours

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




(a) 15 square units

(b) 18 square units

(c) 20 square units

(d) 24 square units

19. A student says "multiplication always makes numbers bigger." How should the teacher address this misconception?

    (a) Ignore it as minor error

    (b) Discuss multiplication with fractions less than 1

    (c) Give more multiplication practice

    (d) Ask another student to correct

20. Find the smallest number which when decreased by 3 is divisible by 14, 21, and 28.

    (a) 81

    (b) 85

    (c) 87

    (d) 91

21. In a pie chart, the sector angle for mathematics is 90°. If the total data represents 240 items, how many items are in the mathematics sector?

    (a) 50

    (b) 55

    (c) 60

    (d) 65

22. Which teaching approach is most effective for developing problem-solving skills in mathematics?

    (a) Rote learning of procedures

    (b) Guided discovery and exploration

    (c) Solving many similar problems

    (d) Memorizing formulas

23. A shopkeeper buys 80 oranges for Rs.320 and sells them at Rs.6 each. What is his profit percentage?

    (a) 40%

    (b) 45%

    (c) 50%

    (d) 55%

24. The perimeter of an equilateral triangle is 45 cm. What is its area?

(a) 64.95 $cm^2$

(b) 72.25 $cm^2$

(c) 84.65 $cm^2$

(d) 97.43 $cm^2$

25. For teaching the concept of time to Class II students, which activity is most developmentally appropriate?

(a) Solving word problems

(b) Using analog clock with movable hands

(c) Memorizing time tables

(d) Writing digital time

26. If 0.4 of a number is 28, what is 0.75 of the same number?

(a) 50

(b) 52.5

(c) 55

(d) 57.5

27. A cylinder has radius 14 cm and height 10 cm. What is its curved surface area? (Use $\pi = \frac{22}{7}$)

(a) 860 $cm^2$

(b) 880 $cm^2$

(c) 900 $cm^2$

(d) 920 $cm^2$

28. Using real-life contexts for teaching mathematics primarily helps in:

(a) Making mathematics abstract

(b) Developing mathematical relevance

(c) Increasing difficulty level

(d) Reducing thinking time

29. Simplify: 23.45 + 17.80 - 12.65

(a) 28.40

(b) 28.60

(c) 28.80

(d) 29.00

30. In a class of 48 students, the ratio of boys to girls is 5:3. If 4 more girls join the class, what will be the new ratio of boys to girls?

    (a) 4:3

    (b) 3:2

    (c) 5:4

    (d) 2:1