Squares and Square Roots

Practice Worksheet

Name: _____ Date: _____

SECTION A | OBJECTIVE QUESTIONS

Choose one correct option for each question.

1. Which of the following is a perfect square?

   A) 128 B) 196 C) 250 D) 300

2. What is the square of 35?

   A) 1,125 B) 1,225 C) 1,325 D) 1,425

3. What is the value of $\sqrt{729}$?

   A) 23 B) 25 C) 27 D) 29

4. Which digit cannot be the units digit of a perfect square?

   A) 0 B) 1 C) 5 D) 8

5. How many natural numbers lie strictly between 8^2 and 9^2?

   A) 15 B) 16 C) 17 D) 18

6. What is the least number by which 72 must be multiplied to make a perfect square?

   A) 2 B) 3 C) 6 D) 8

7. What is the least number by which 180 must be divided to make a perfect square?

   A) 2 B) 3 C) 5 D) 10

8. What is the units digit of 47^2?

   A) 1 B) 4 C) 7 D) 9

9. What is the value of $\sqrt{0.81}$?

   A) 0.09 B) 0.9 C) 9 D) 90

10. A square has an area of 169 cm^2. What is its perimeter?

    A) 13 cm B) 26 cm C) 39 cm D) 52 cm

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SECTION B | SUBJECTIVE QUESTIONS

Show your method and write each final answer clearly.

11. Find the square of 48 using $(a - b)^2$. Show all steps.

12. Find $\sqrt{1764}$ by prime factorisation.

13. Find $\sqrt{2025}$ using the long division method.

14. Find the smallest number by which 252 must be multiplied to make a perfect square. Also find the square root of the new number.

15. Find the smallest number by which 675 must be divided to make a perfect square. Also find the square root of the quotient.

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SECTION B | SUBJECTIVE QUESTIONS (CONTINUED)

Show your method and write each final answer clearly.

16. Find the least number that must be added to 950 to make a perfect square. State the resulting perfect square.

17. Find the least number that must be subtracted from 1500 to make a perfect square. State the resulting perfect square.

18. Find the smallest four-digit perfect square. Show your reasoning.

19. Find $\sqrt{12.96}$. Show your working.

20. A school arranges 784 students in a square formation, with the same number of rows and columns. How many students are in each row? If one complete row is removed, how many students remain?