Square Root of a Perfect Square by the Long Division Method

A. Choose the correct answer:

1. The long division method is used to find the square root of.

a) Only fractions b) Perfect square numbers

c) Prime numbers d) Odd numbers

2. In the long division method, we group digits of the number in pairs starting from.

a) Left b) Right

c) Middle d) Anywhere

3. The divisor in the first step is found by.

a) Dividing the number by 2

b) Finding the square of a number

c) Finding the largest number whose square is less than or equal to the first group

d) Subtracting 1

4. Which number's square root is found by grouping digits as (9)(00)(00).

a) 90000 b) 9000000

c) 9000 d) 900

5. The long division method helps in finding.

a) Approximate square roots b) Exact square roots

c) Multiplication d) Square of a number

B. Write the Missing Terms to Complete the Sentences:

1. In long division method, digits are grouped in pairs from the _____.
2. The square root of 2025 using long division method is _____.
3. The divisor in each step is obtained by doubling the _____.
4. We always start with the _____ group on the left side.
5. Long division method gives a square root in a _____ manner.

C. Figure out the answers to these questions:

1. Find the square root of 2025 using the long division method.
2. Explain the steps involved in the long division method to find square root of 1521.

3. Show how to use the long division method to find the square root of 1225.
4. Why do we group digits in pairs while using the long division method.
5. If the square root of a number is 43 using long division method, what is the original number.

D. Mark each sentence with a True (✓) or False (✗):

1. In long division method, the divisor is formed by doubling the current quotient _____
2. The long division method is useful only for prime numbers _____
3. We group digits in pairs from right to left before applying the long division method _____
4. The quotient obtained in long division gives the square root of the number _____
5. Long division method works only for numbers greater than 100 _____

E. Challenge yourself with these questions:

1. Find the square root of 3249 using long division method.
2. Use long division method to check if 1225 is a perfect square.
3. Write all steps of finding square root of 1369 using long division.
4. Explain the role of trial and error in the long division method.
5. If the quotient from long division is 29, what number's square root was being found.