SQUARE AND SQUARE ROOTS

MATHEMATICS
CLASS-8TH
DPP-1

1. Find the squares of the following.
(a) 36ab (b) -5.12 (c) $\frac{4}{13}$ (d) $\frac{2a}{7b}$

2. Check if the following numbers are perfect squares.
(a) 3600 (b) 6543 (c) 3249 (d) 4475

3. Without actual calculation, find the value of the sum 1 + 3 + 5 + 7 + 9 .

4. Check whether the following numbers are perfect squares or not, by expressing each as the sum of odd numbers.
(a) 80 (b) 64

5. Without actual calculation, find the number of non-perfect square numbers between 324 and 361.

6. Without actual calculation, find the difference between 576 and 625.

7. Write the square of 23 as the sum of two consecutive natural numbers.

8. Check whether the following numbers are perfect squares.
(a) 2025 (b) 10584 (c) 7056 (d) 5376

9. Find the smallest number with which the following numbers should be multiplied, so that the product is a perfect square.
(a) 5184 (b) 5103 (c) 4375 (d) 3675

10. Find the smallest number with which the following numbers should be divided, so that the quotient is a perfect square.
(a) 12960 (b) 2700 (c) 11200 (d) 8820

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MATHEMATICS
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DPP-2

1. Find the value of $\frac{555^2}{12321}$ without actual calculation.
2. Find the value of $\frac{4004^2}{1002001}$ with out actual calculation
3. Find the value of $\frac{3030303^2}{(1020304030201)\times(1+2+3+4+5+4+3+2+1)}$
4. Find the squares of the following numbers using the shortcut method.
   a. 125^2 b. 35^2 c. 85^2 d. 15^2
5. Write the value of $7^2 + 8^2 + 56^2$ as a square of a number.
6. Write the number 43^2 as the sum of three perfect squares.
7. Check whether the following are Pythagorean triplets.
   a. (13, 84, 85) c. (9, 12, 15)
   b. (8, 15,19) d. (9, 40, 41)
8. Write a Pythagorean triplet having 8 as its smallest element.
9. Write a Pythagorean triplet having 30 as its smallest element.
10. Write a Pythagorean triplet having 26 as its largest element.

1. Find the square roots of the following numbers by guessing the units and tens digits
   (a) 729
   (b) 1764
   (c) 5625
   (d) 324
2. Find the square roots of the following numbers by the prime factorization method.
   (a) 2601
   (b) 484
   (c) 1225
   (d) 7569
3. Find the square root of the following numbers using the successive subtraction method.
   (a) 16
   (b) 64
   (c) 81
   (d) 121
4. Find the square root of the following numbers using the long division method.
   (a) 784
   (b) 3481
   (c) 6724
   (d) 12996
5. Find the least number to be subtracted from 12345 to get a perfect square
6. Find the least number to be added to 12345 to get a perfect square.
7. Find the length of the side of a square with area 324 sq cm.
8. Find the square root of 2601 using long division and hence find the value of the expression $\sqrt{2601} + \sqrt{26.01} + \sqrt{0.2601} + \sqrt{0.002601}$
9. Find the square root of the following decimal numbers using long division method.
   (a) 68.89
   (b) 1.3456
   (c) 7.84
   (d) 108.16
10. Find the square root of the following numbers using long division method correct up to 2 decimal places.
    (a) 68
    (b) 2.34
    (c) 18.74
    (d) 545
11. Find the square root of the following rational numbers.
    (a) $\frac{225}{400}$
    (b) $7\frac{1}{4}$
    (c) $56\frac{1}{4}$
    (d) $\frac{7}{12}$

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MATHEMATICS
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DPP-4

A. Select the appropriate choice for the following statements

1. The square of 4ab is .....
a. 16qb b. $16\ a^2b^2$ c. $4\ a^2b^2$ d. 2ab

2. The square root of 16 is .....
a. 4 b. 2 c. 256 d. 8

3. The number .....from the following is not a perfect square.
a. 4096 b. 4356 c. 4228 d. 4489

4. The square of 25 is.....
a. 1225 b. 625 c. 225 d. 50

5. The number of zeroes in the square of 300 of .....
a. 2 b. 8 c. 6 d. 4

6. Match the following numbers in the first column to their respective square roots.

	Number		Square Roots
A	40000	I	0.06
B	225	II	0.6
C	0.0036	III	200
D	400	IV	20
E	0.36	V	15

7. Write the least number x such that the following numbers are perfect squares
a. 1800 – x
b. 1800 + x
c. 1800 × x
d. 1800 ÷ x

8. Find the squares of the following numbers.
a. 34 b. 2.65 c. 3abc d. $\frac{7}{9}$

9. Check if the following numbers are perfect squares.
a. 8100 b. 1022 c. 1370 d. 4346

10. Find the square roots of the following numbers.
a. 441 b. 20449 c. 126.1129 d. 4