

Question Bank

1. FILL IN THE BLANKS.

- A number ending in 2, 3, 7 or 8 _____ (can/cannot) be a perfect square.
- A number ending in _____ (even/odd) number of zeros is not a perfect square.
- Squares of even numbers are always _____ (even/odd).
- Squares of odd numbers are always _____ (even/odd).
- If three natural numbers a, b, c are such that, $a^2 + b^2 = c^2$ they are called _____.

2. CHOOSE THE CORRECT ANSWER.

- By observation, say which of the following is not a perfect square:
 - 9409
 - 12,769
 - 20,167
 - 36,864
- Say which of the following is the square of an odd number:
 - 7744
 - 12,321
 - 14,884
 - 11,664
- Say which of the following is the square of an even number:
 - 5929
 - 15,129
 - 42,025
 - 42,436
- Answer without actually calculating: $1 + 3 + 5 + 7 = ?$
 - 3^2
 - 4^2
 - 5^2
 - 6^2
- By what number will you multiply ($2 \times 2 \times 7$) to get a perfect square?
 - 2
 - 3
 - 7
 - 10
- By what number will you divide ($3 \times 3 \times 5 \times 5 \times 5$) to get a perfect square?
 - 2
 - 5
 - 3
 - 1

3. ANSWER THE FOLLOWING.

- Find the following without calculating squares:
 - $13^2 - 12^2 =$
 - $101^2 - 100^2 =$
- Find without adding (give the answer as a square of a number):
 - $1 + 3 + 5 + 7 + 9$
 - $1 + 3 + 5 + 7 + 9 + 11 =$
- Form the following Pythagorean triples:
 - 7, _____, _____
 - 10, _____, _____
- Using prime factorisation, find if the following are perfect squares:
 - 676
 - 1679
 - 7744
- Find the square root of the following by prime factorisation:
 - 7225
 - 10404
 - 46656
- Find the least number that should be added to make the following a perfect square:
 - 1084
 - 6078
 - 93020
- Find the length of the diagonal of a rectangle with length 63 cm and width 16 cm.
- Find the square roots of the following perfect squares:
 - 148.84
 - 462.25
 - 1049.76
- Find the square root of 172225. Hence find the value of $\sqrt{17.2225}$ and $\sqrt{1722.25}$
- Find the square root of the following correct to two decimal places:
 - 1.8
 - 13
 - 296
 - 66.74
- Find the value of the following correct to two decimal places:
 - $\sqrt{3\frac{2}{5}}$
 - $\frac{1}{\sqrt{5}}$

l. Estimate the square roots of the following to two decimals:

- i. 20 ii. 300 iii. 2700

m. Estimate the length of the diagonal of a square with the following side:

- i. 4 cm ii. 6 cm iii. 12 cm

