4. Which of the following will have 4 at the units place?

(a) 14^2 (b) 62^2 (c) 27^2 (d) 35^2

5. How many natural numbers lie between 5^2 and 6^2?

(a) 9 (b) 10 (c) 11 (d) 12

6. Which of the following cannot be a perfect square?

(a) 841 (b) 529 (c) 198

(d) All of the above

7. The one's digit of the cube of 23 is

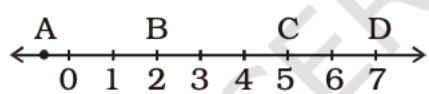
(a) 6 (b) 7 (c) 3 (d) 9

8. A square board has an area of 144 square units. How long is each side of the board?

(a) 11 units (b) 12 units (c) 13 units (d) 14 units

9. Which letter best represents the location of $\sqrt{25}$ on a number line?

(a) A (b) B (c) C (d) D



10. If one member of a pythagorean triplet is 2m, then the other two members are

(a) m, m^2+1

(b) m^2+1, m^2-1

(c) m^2, m^2-1

(d) $m^2, m+1$

11. The sum of successive odd numbers 1, 3, 5, 7, 9, 11, 13 and 15 is

(a) 81 (b) 64 (c) 49 (d) 36

12. The sum of first n odd natural numbers is

(a) $2n+1$ (b) n^2 (c) n^2-1 (d) n^2+1

13. Which of the following numbers is a perfect cube?

(a) 243 (b) 216 (c) 392 (d) 8640

14. The hypotenuse of a right triangle with its legs of lengths $3x \times 4x$ is

(a) $5x$ (b) $7x$ (c) $16x$ (d) $25x$

15. The next two numbers in the number pattern 1, 4, 9, 16, 25 ... are

(a)35, 48 (b) 36, 49 (c) 36, 48 (d) 35,49

state whether the statements are true (T) or false (F).

53. The square root of 1521 is 31.

54. Each prime factor appears 3 times in its cube.

55. The square of 2.8 is 78.4.

56. The cube of 0.4 is 0.064.

57. The square root of 0.9 is 0.3.

58. The square of every natural number is always greater than the number itself.

59. The cube root of 8000 is 200.

60. There are five perfect cubes between 1 and 100.

61. There are 200 natural numbers between 100^2 and 101^2.

62. The sum of first n odd natural numbers is n^2.

63. 1000 is a perfect square.

64. A perfect square can have 8 as its units digit.

65. For every natural number m, $(2m-1, 2m^2-2m, 2m^2-2m+1)$ is a pythagorean triplet.

66. All numbers of a pythagorean triplet are odd.

130. Find three numbers in the ratio 2:3:5, the sum of whose squares is 608.

135. Evaluate : $\sqrt[3]{27} + \sqrt[3]{0.008} + \sqrt[3]{0.064}$