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Marks: 20

STD: VIII

TT - MATHS

Time: 40min

I. Answer in one word:

1. Because, the square will not end with 2, 3, 8, 7

2. 36

3.  $(2m)^2 + (m^2 - 1)^2$   $(m^2 + 1)^2$  (or)  $2m, m^2 - 1, m^2 + 1$

4. Even

5. 0, 1, 5, 6 or 9

II. Answer the following:

6. Here,  $2m = 10 = m = \frac{10}{2}$

Since,  $2m = 2(5) = 10$

$m^2 - 1 = (5)^2 - 1 = 25 - 1 = 24$

$m^2 + 1 = (5)^2 + 1 = 25 + 1 = 26$

10, 24 & 26 are the Pythagorean triplet.

7.  $(82)^2 = (80 + 2)^2$

$= (80 + 2)(80 + 2)$

$= 80(80 + 2) + 2(80 + 2)$

$= 6400 + 160 + 160 + 4$

$= 6724$

8. a) 11 and 12

Let  $n = 11$

$= 2n = 2(11) = 22$

There are 22 numbers lie between the square of 11 and 12.

b) (i) 1 (ii) 5

9.  $9999^2 = 9\underline{998000}1$

$99999^2 = 9999800001$

10. a) (i) 2 zeroes (ii) 4 zeroes (or) i) 2500 (ii) 4000

b) 21 is the odd number.