SQUARES AND SQUARE ROOTS

FINDING THE SQUARE OF A NUMBER

EXERCISE

Q.1 The square of which of the following numbers would be an odd number/an even number ? Why ?

(i) 727 (ii) 158

(iii) 269 (iv) 1980

Q.2 What will be the number of zeros in the square of the following numbers ?

(i) 60 (ii) 400

Q.3 How many natural numbers lie between 9^2 and 10^2 ? Between 11^2 and 12^2 ?

Q.4 How many non square numbers lie between the following pairs of numbers

(i) 100^2 and 101^2

(ii) 90^2 and 91^2

(iii) 1000^2 and 1001^2

Q.5 Find whether each of the following numbers is a perfect square or not ?

(i) 121 (ii) 55 (iii) 81

(iv) 49 (v) 69

Q.6 Express the following as the sum of two consecutive integers.

(i) 21^2 (ii) 13^2

(iii) 11^2 (iv) 19^2

Q.7 Is it possible that the sum of any two consecutive positive integers is perfect square of a number ? Give example to support your answer.

Q.8 Find the value of $17^2 - 12^2 + 15^2 - 10^2$

Q.9 What will be the unit digit of the squares of the following numbers ?

(i) 81 (ii) 272

(iii) 799 (iv) 3853

(v) 1234 (vi) 26387

(vii) 52698 (viii) 99880

(ix) 12796 (x) 55555

Q.10 The following numbers are obviously not perfect squares. Give reason.

(i) 1057 (ii) 23453

(iii) 7928 (iv) 222222

(v) 64000 (vi) 89722

(vii) 222000 (viii) 505050

ANSWER KEY

1. (i) Odd ∵ unit place will be 9

(ii) Even ∵ unit place will be 4

(iii) Odd ∵ unit place will be 1

(iv) Even ∵ unit place will be 0

2. (i) Two (ii) Four

3. (i) 18 (ii) 22

4. (i) 200 (ii) 180 (iii) 2000

5. (i) Yes (ii) No (iii) Yes

(iv) Yes (v) No

6. (i) $21^2 = 441 = 220 + 221$

(ii) $13^2 = 169 = 84 + 85$

(iii) $11^2 = 121 = 60 + 61$

(iv) $19^2 = 361 = 180 + 181$

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8. 270

9. (i) 1 (ii) 4

(iii) 1 (iv) 9

(v) 6 (vi) 9

(vii) 4 (viii) 0

(ix) 6 (x) 5

10. These numbers end with

(i) 7 (ii) 3

(iii) 8 (iv) 2

(v) 0 (vi) 2

(vii) 0 (viii) 0