

# FUN WITH SQUARES

**SQUARE – multiplying a number by itself**

**this can be written as**  $3^2 = 3 \times 3 = 9$

**SQUARE ROOTS -- can be described as follows:**

- what number multiplied by itself equals 9
- what number squared equals 9
- what number equals the square root of 9

the square root of 9 is written as  $\sqrt{9}$

or  $\sqrt{9} = 3$

|   |  |        |        |        |        |        |        |        |        |        |        |
|---|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| squares from 0 to 10                        | $0^2$  | $1^2$  | $2^2$  | $3^2$  | $4^2$  | $5^2$  | $6^2$  | $7^2$  | $8^2$  | $9^2$  | $10^2$ |
|   | 0  | 1      | 4      | 9      | 16     | 25     | 36     | 49     | 64     | 81     | 100    |
| squares from 10 to 20                       | $10^2$   | $11^2$ | $12^2$ | $13^2$ | $14^2$ | $15^2$ | $16^2$ | $17^2$ | $18^2$ | $19^2$ | $20^2$ |
|   | 100  | 121    | 144    | 169    | 196    | 225    | 256    | 289    | 324    | 361    | 400    |
|   |  |        |        |        |        |        |        |        |        |        |        |
| notice the pattern                          | 0  | 1      | 4      | 9      | 6      | 5      | 6      | 9      | 4      | 1      | 0      |
| created by the last<br>digit of each square | (this pattern repeats for every set of 10 squares) |        |        |        |        |        |        |        |        |        |        |

[illegible]

# Practice

# Squares

(answers  
on next  
page)

$$1^2 =$$

$$7^2 =$$

$$14^2 =$$

$$2^2 =$$

$$8^2 =$$

$$15^2 =$$

$$3^2 =$$

$$9^2 =$$

$$16^2 =$$

$$4^2 =$$

$$10^2 =$$

$$17^2 =$$

$$5^2 =$$

$$11^2 =$$

$$18^2 =$$

$$6^2 =$$

$$12^2 =$$

$$19^2 =$$

$$13^2 =$$

$$20^2 =$$

# Practice Square Roots

|                 |                   |                   |
|-----------------|-------------------|-------------------|
| $\sqrt{1} = 1$  | $\sqrt{49} = 7$   | $\sqrt{196} = 14$ |
| $\sqrt{4} = 2$  | $\sqrt{64} = 8$   | $\sqrt{225} = 15$ |
| $\sqrt{9} = 3$  | $\sqrt{81} = 9$   | $\sqrt{256} = 16$ |
| $\sqrt{16} = 4$ | $\sqrt{100} = 10$ | $\sqrt{289} = 17$ |
| $\sqrt{25} = 5$ | $\sqrt{121} = 11$ | $\sqrt{324} = 18$ |
| $\sqrt{36} = 6$ | $\sqrt{144} = 12$ | $\sqrt{361} = 19$ |
|                 | $\sqrt{169} = 13$ | $\sqrt{400} = 20$ |

$$\sqrt{625}$$

$$\sqrt{10,000}$$

$$\sqrt{1,000,000}$$

$$\sqrt{0}$$

$$\sqrt{900}$$

$$\sqrt{6,400}$$

$$\sqrt{4,900}$$

$$\sqrt{100,000,000}$$

$$\sqrt{-1}$$

$$\sqrt{3,600}$$

$$\sqrt{2,025}$$

$$\sqrt{289}$$

$$\sqrt{361}$$

$$\sqrt{196}$$

$$\sqrt{256}$$

$$\sqrt{625} = 25$$

$$\sqrt{6,400} = 80$$

$$\sqrt{2,025} = 45$$

$$\sqrt{10,000} = 100$$

$$\sqrt{4,900} = 70$$

$$\sqrt{289} = 17$$

$$\sqrt{1,000,000} = 1,000$$

$$\sqrt{100,000,000} = 10,000$$

$$\sqrt{361} = 19$$

$$\sqrt{0} = 0$$

$$\sqrt{-1} = \text{imaginary number}$$

$$\sqrt{196} = 14$$

$$\sqrt{900} = 30$$

$$\sqrt{3,600} = 60$$

$$\sqrt{256} = 16$$