

**Perfect Squares**

$1^2 = 1 \times 1 = 1$

$11^2 = 11 \times 11 = 121$

$21^2 = 21 \times 21 = 441$

$2^2 = 2 \times 2 = 4$

$12^2 = 12 \times 12 = 144$

$22^2 = 22 \times 22 = 484$

$3^2 = 3 \times 3 = 9$

$13^2 = 13 \times 13 = 169$

$23^2 = 23 \times 23 = 529$

$4^2 = 4 \times 4 = 16$

$14^2 = 14 \times 14 = 196$

$24^2 = 24 \times 24 = 576$

$5^2 = 5 \times 5 = 25$

$15^2 = 15 \times 15 = 225$

$25^2 = 25 \times 25 = 625$

$6^2 = 6 \times 6 = 36$

$16^2 = 16 \times 16 = 256$

$26^2 = 26 \times 26 = 676$

$7^2 = 7 \times 7 = 49$

$17^2 = 17 \times 17 = 289$

$27^2 = 27 \times 27 = 729$

$8^2 = 8 \times 8 = 64$

$18^2 = 18 \times 18 = 324$

$28^2 = 28 \times 28 = 784$

$9^2 = 9 \times 9 = 81$

$19^2 = 19 \times 19 = 361$

$29^2 = 29 \times 29 = 841$

$10^2 = 10 \times 10 = 100$

$20^2 = 20 \times 20 = 400$

$30^2 = 30 \times 30 = 900$

**Perfect Cubes**

$1^3 = 1 \times 1 \times 1 = 1$

$6^3 = 6 \times 6 \times 6 = 216$

$11^3 = 11 \times 11 \times 11 = 1331$

$2^3 = 2 \times 2 \times 2 = 8$

$7^3 = 7 \times 7 \times 7 = 343$

$12^3 = 12 \times 12 \times 12 = 1728$

$3^3 = 3 \times 3 \times 3 = 27$

$8^3 = 8 \times 8 \times 8 = 512$

$13^3 = 13 \times 13 \times 13 = 2197$

$4^3 = 4 \times 4 \times 4 = 64$

$9^3 = 9 \times 9 \times 9 = 729$

$14^3 = 14 \times 14 \times 14 = 2744$

$5^3 = 5 \times 5 \times 5 = 125$

$10^3 = 10 \times 10 \times 10 = 1000$

$15^3 = 15 \times 15 \times 15 = 3375$

**Exponential Value of  $a^m$ , where  $a = \{1, 2, 3, 4, 5\}$  and  $m = \{0, 1, 2, 3, 4, 5\}$**

$1^0 = 1; 2^0 = 1; 3^0 = 1; 4^0 = 1; 5^0 = 1;$

$1^1 = 1; 2^1 = 2; 3^1 = 3; 4^1 = 4; 5^1 = 5;$

$1^2 = 1; 2^2 = 4; 3^2 = 9; 4^2 = 16; 5^2 = 25;$

$1^3 = 1; 2^3 = 8; 3^3 = 27; 4^3 = 64; 5^3 = 125;$

$1^4 = 1; 2^4 = 16; 3^4 = 81; 4^4 = 256; 5^4 = 625;$

$1^5 = 1; 2^5 = 32; 3^5 = 243; 4^5 = 1024; 5^5 = 3125$

**Sum of the first 'n' natural numbers ( $\Sigma n$ ):**

$1 + 2 = 3, 1 + 2 + 3 = 6; 1 + 2 + 3 + 4 = 10; 1 + 2 + 3 + 4 + 5 = 15; 1 + 2 + 3 + 4 + 5 + 6 = 21$

$1 + 2 + 3 + 4 + 5 + 6 + 7 = 28;$

$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 = 36;$

$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 = 45;$

$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 55.$

**Product of the first 'n' natural numbers ( $n!$  Factorial  $n$ ):**

$1 \times 2 = 2; 1 \times 2 \times 3 = 6; 1 \times 2 \times 3 \times 4 = 24; 1 \times 2 \times 3 \times 4 \times 5 = 120; 1 \times 2 \times 3 \times 4 \times 5 \times 6 = 720$

$1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 = 5040;$

$1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 = 40320;$

$1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9 = 362880; 1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9 \times 10 = 3628800.$