Powers of 10 Notes

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10^2 ← Exponent

BASE

Power of 10	What It Means	What It Is Worth
10^0		1
10^1	10	10
10^2	10 x 10	100
10^3	10 x 10 x 10	1,000
10^4	10 x 10 x 10 x 10	10,000
10^5	10 x 10 x 10 x 10 x 10	100,000
10^6	10 x 10 x 10 x 10 x 10 x 10	1,000,000 1 million

Using Powers of 10 to Write Numbers in Expanded Form

1) 546 $500 + 40 + 6$

$\rightarrow 5 \times 10^2 + 4 \times 10^1 + 6 \times 10^0$

2) 3,891 $3000 + 800 + 90 + 1$

$3 \times 10^3 + 8 \times 10^2 + 9 \times 10^1 + 1 \times 10^0$

3) 50, 680

$5 \times 10^4 + 6 \times 10^3 + 8 \times 10^1$

4) Write this number in standard form:

$6 \times 10^3 + 4 \times 10^2 + 1 \times 10^1 + 3 \times 10^0$

$6 \times 1000 \quad 4 \times 100 \quad 1 \times 10 \quad 3 \times 1$

$6000 + 400 + 10 + 3$

6,413

5) Write this number in standard form:

$5 \times 10^5 + 2 \times 10^4 + 6 \times 10^3 + 2 \times 10^1$

$5 \times 100000 \quad 2 \times 10000 \quad 6 \times 1000 \quad 2 \times 10$

$500,000 + 20,000 + 6000 \quad 20$

526,020