

## Exponents

The expression below has a *base* and an *exponent*. What number is the base? What number is the exponent? What is the value of the expression?

$$5^2$$

The exponent means the number of times the base should be multiplied by itself.

**Write the following expressions as a product of the bases:**

1.  $2^3$

2.  $3^4$

3.  $5^4$

4.  $10^3$

**Evaluate each expression:**

1.  $5^2$

2.  $3^3$

3.  $10^5$

4.  $9^2$

When a number is raised to the second power it is *squared*. We can say that  $3^2$  is "three squared."

When a number is raised to the third power it is *cubed*. We can say  $4^3$  is "four cubed."

## Order of Operations

Evaluate the following expression:  $2 + 3 \cdot 4$

**List the correct Order of Operations**

- 1.
- 2.
- 3.
- 4.

**Evaluate each expression:**

1.  $5(4 - 2)^2$

2.  $24 - 2(3) + 1$

3.  $3 + 5^2$

4.  $(3 + 5)^2$

5.  $18 \div 2 \cdot 3$

6.  $30 - (1 + 2)^3$

**7.**  $5(3 + 2 \cdot 3) - 45$

**8.**  $5(8 - 2 \cdot 3)^2$

**9.**  $(2)(3) + (3)(2)^2$

**10.**  $16 \div 8 \cdot 6 + 3$

**11.**  $4[8 - 2(1 + 2)]$

**12.**  $5(2)^2 - 3(5 - 4)$

**13.**  $4(5 - 2)^2$

**14.**  $18 - (2 + 3 \cdot 2)$

**15.**  $8 + 4^2 \div 2 - 1$

**16.**  $20 + 5(1 + 2)^2$