

1.  $a^n \cdot a^m = a^{n+m}$

2.  $\frac{a^n}{a^m} = a^{n-m} \quad a \neq 0$

3.  $(a^n)^m = a^{nm}$

4.  $(ab)^n = a^n b^n$

5.  $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n} \quad b \neq 0$

6.  $a^0 = 1$  if  $a \neq 0$  and  $0^0$  is undefined

7.  $a^{-n} = \frac{1}{a^n} \quad a \neq 0$