Math Formulas: Exponents

Exponential Formulas

1. $a^p = \underbrace{a \cdot a \cdot \ldots a}_{p} \quad$ (if $\ p \in \mathbb{N}$)

2. $a^0 = 1 \quad$ (if $\ a \neq 0$)

3. $a^r \cdot a^s = a^{r+s}$

4. $\dfrac{a^r}{a^s} = a^{r-s}$

5. $\left(a^r\right)^s = a^{r \cdot s}$

6. $(a \cdot b)^r = a^r \cdot b^r$

7. $\left(\dfrac{a}{b}\right)^r = \dfrac{a^r}{b^r}$

8. $a^{-r} = \dfrac{1}{a^r}$

9. $a^{\frac{r}{s}} = \sqrt[s]{a^r}$