

ALGEBRAIC AND TRIGONOMETRIC IDENTITIES

1. EXPONENTIAL IDENTITIES

(1) $x^0 =$

(2) $x^1 =$

(3) $x^{-m} =$

(4) $(xy)^m =$

(5) $x^{m+n} =$

(6) $x^{m-n} =$

(7) $\sqrt[n]{x^n} =$ (as fractional exponent)

(8) $(x^m)^n =$

2. LOGARITHMIC IDENTITIES

(9) $x = \log_b y \iff y =$

(10) $x = \ln y \iff y =$

(11) $\log_b 1 =$

(12) $\log_b b =$

(13) $\log_b (b^n) =$

(14) $\log_b (xy) =$

(15) $\log_b \left(\frac{x}{y}\right) =$

(16) $\log_b (x^m) =$

3. TRIGONOMETRIC IDENTITIES

Ratio identities.

(17) $\tan \theta =$

(18) $\csc \theta =$

(19) $\sec \theta =$

(20) $\cot \theta =$

Angle-sum/difference identities.

(21) $\sin(\theta \pm \phi) =$

(22) $\cos(\theta \pm \phi) =$

Double-angle identities.

(23) $\sin(2\theta) =$

(24) $\cos(2\theta) =$

$=$

$=$

Power-reduction identities.

(25) $\sin^2 \theta =$

(26) $\cos^2 \theta =$