

SOME TRIG. FORMULAS

$$(1) \sin(\cos^{-1}x) = \sqrt{1-x^2}$$

$$(2) \cos(\sin^{-1}x) = \sqrt{1-x^2}$$

$$(3) \sin(\tan^{-1}x) = \frac{x}{\sqrt{x^2+1}}$$

$$(4) \cos(\tan^{-1}x) = \frac{1}{\sqrt{x^2+1}}$$

$$(5) \sec(\tan^{-1}x) = \sqrt{1+x^2}$$

$$(6) \tan(\sec^{-1}x) = \pm \sqrt{x^2-1} = \frac{\sqrt{x^2-1}}{\sqrt{x^2}} \cdot x = \sqrt{1-\frac{1}{x^2}} \cdot x$$

$$(7) \sin(\sec^{-1}x) = \frac{\sqrt{x^2-1}}{|x|} = \frac{\sqrt{x^2-1}}{\sqrt{x^2}} = \sqrt{1-\frac{1}{x^2}}$$

$$(8) \cos(\sec^{-1}x) = \frac{1}{x}$$

$$(9) \tan(\cos^{-1}x) = \frac{\sqrt{1-x^2}}{x}$$

$$(10) \cot(\cos^{-1}x) = \frac{x}{\sqrt{1-x^2}}$$

$$(11) \tan(\sin^{-1}x) = \frac{x}{\sqrt{1-x^2}}$$

$$(12) \cot(\sin^{-1}x) = \frac{\sqrt{1-x^2}}{x}$$