

ចំពោះចំនួនគត់ណាមួយ k គេបាន

$$(1) \quad \sin(k2\pi + \alpha) = \sin \alpha$$

$$(2) \quad \cos(k2\pi + \alpha) = \cos \alpha$$

$$(3) \quad \tan(k2\pi + \alpha) = \tan \alpha$$

$$(4) \quad \cot(k2\pi + \alpha) = \cot \alpha$$

$$(5) \quad \sin\left(\frac{\pi}{2} - \alpha\right) = \cos \alpha$$

$$(6) \quad \cos\left(\frac{\pi}{2} - \alpha\right) = \sin \alpha$$

$$(7) \quad \tan\left(\frac{\pi}{2} - \alpha\right) = \cot \alpha$$

$$(8) \quad \cot\left(\frac{\pi}{2} - \alpha\right) = \tan \alpha$$

$$(9) \quad \sin(\pi - \alpha) = \sin \alpha$$

$$(10) \quad \cos(\pi - \alpha) = -\cos \alpha$$

$$(11) \quad \tan(\pi - \alpha) = -\tan \alpha$$

$$(12) \quad \cot(\pi - \alpha) = -\cot \alpha$$

$$(13) \quad \sin(\pi + \alpha) = -\sin \alpha$$

$$(14) \quad \cos(\pi + \alpha) = -\cos \alpha$$

$$(15) \quad \tan(\pi + \alpha) = \tan \alpha$$

$$(16) \quad \cot(\pi + \alpha) = \cot \alpha$$

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$$(17) \quad \tan(k\pi + \alpha) = \tan \alpha$$

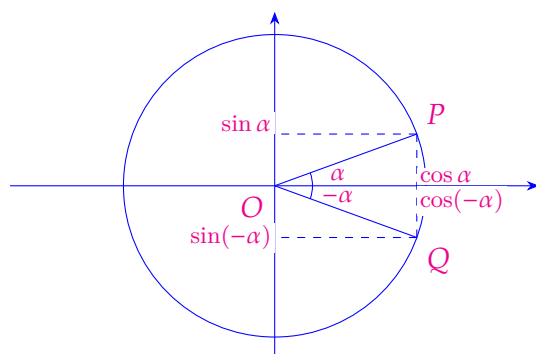
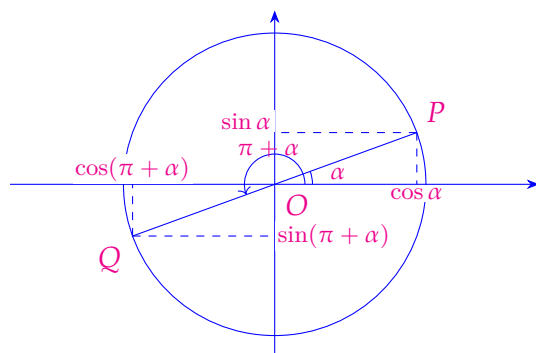
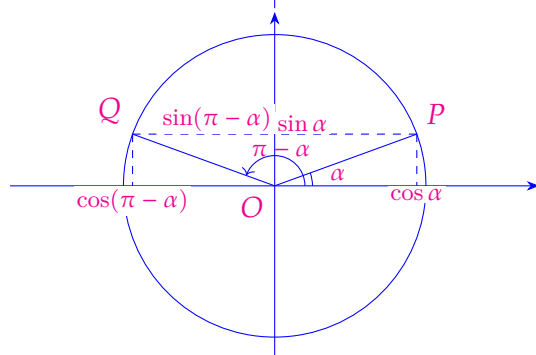
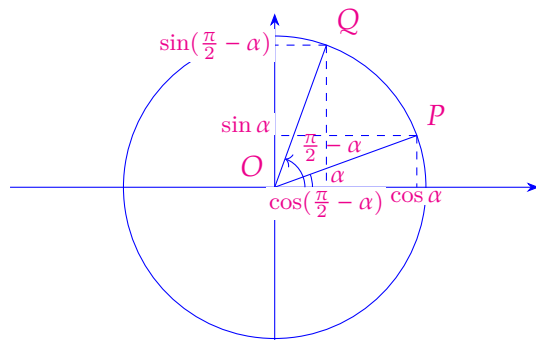
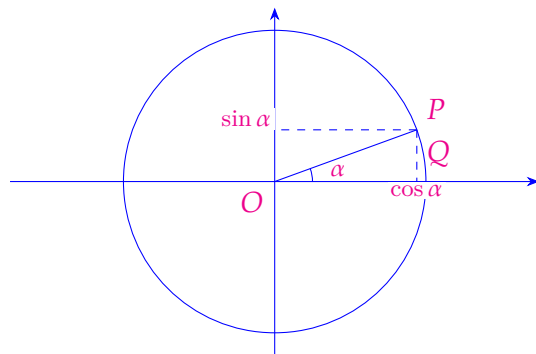
$$(18) \quad \cot(k\pi + \alpha) = \cot \alpha$$

$$(19) \quad \sin(-\alpha) = -\sin \alpha$$

$$(20) \quad \cos(-\alpha) = \cos \alpha$$

$$(21) \quad \tan(-\alpha) = -\tan \alpha$$

$$(22) \quad \cot(-\alpha) = -\cot \alpha$$



$$(23) \quad \cos^2 \alpha + \sin^2 \alpha = 1$$

$$(24) \quad \cos(\alpha - \beta) = \cos \alpha \cos \beta + \sin \alpha \sin \beta$$

$$(25) \quad \cos(\alpha + \beta) = \cos \alpha \cos \beta - \sin \alpha \sin \beta$$

$$(26) \quad \sin(\alpha + \beta) = \sin \alpha \cos \beta + \cos \alpha \sin \beta$$

$$(27) \quad \sin(\alpha - \beta) = \sin \alpha \cos \beta - \cos \alpha \sin \beta$$

$$(28) \quad \cos 2\alpha = \cos^2 \alpha - \sin^2 \alpha$$

$$(29) \quad \cos 2\alpha = 2 \cos^2 \alpha - 1$$

$$(30) \quad \cos 2\alpha = 1 - 2 \sin^2 \alpha$$

$$(31) \quad \sin 2\alpha = 2 \sin \alpha \cos \alpha$$

$$(32) \quad 1 - \cos \alpha = 2 \sin^2 \frac{\alpha}{2}$$

$$(33) \quad 1 + \cos \alpha = 2 \cos^2 \frac{\alpha}{2}$$

$$(34) \quad \cos \alpha \cos \beta = \frac{1}{2}(\cos(\alpha - \beta) + \cos(\alpha + \beta))$$

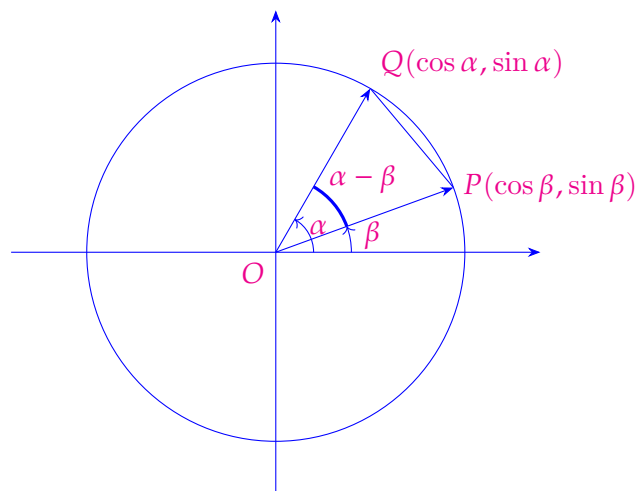
$$(35) \quad \sin \alpha \sin \beta = \frac{1}{2}(\cos(\alpha - \beta) - \cos(\alpha + \beta))$$

$$(36) \quad \sin \alpha \cos \beta = \frac{1}{2}(\sin(\alpha + \beta) + \sin(\alpha - \beta))$$

$$(37) \quad \cos \alpha \sin \beta = \frac{1}{2}(\sin(\alpha + \beta) - \sin(\alpha - \beta))$$

$$(38) \quad \cos \alpha + \cos \beta = 2 \sin\left(\frac{\alpha + \beta}{2}\right) \sin\left(\frac{\alpha - \beta}{2}\right)$$

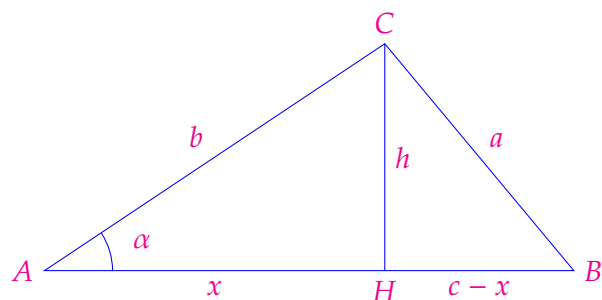
$$(39) \quad \cos \alpha - \cos \beta = -2 \cos\left(\frac{\alpha + \beta}{2}\right) \cos\left(\frac{\alpha - \beta}{2}\right)$$



$$\vec{OP} \cdot \vec{OQ} = OP \cdot OQ \cdot \cos(\alpha - \beta)$$

$$\cos \beta \cos \alpha + \sin \beta \sin \alpha = 1 \cdot 1 \cdot \cos(\alpha - \beta)$$

$$\cos \alpha \cos \beta + \sin \alpha \sin \beta = \cos(\alpha - \beta)$$



$$x^2 + h^2 = b^2$$

$$(c - x)^2 + h^2 = a^2$$

$$x = \frac{-a^2 + b^2 + c^2}{2c}$$

$$\cos \alpha = \frac{x}{b} = \frac{-a^2 + b^2 + c^2}{2bc}$$

ព្យាយាមទាញរករូបមន្តដោយខ្លួនឯងសម្រាប់ \tan និង \cot ។