TRİGONOMETRİ -20

SINIF: 11

KONU: GENEL TEKRAR KONU ÖZETİ

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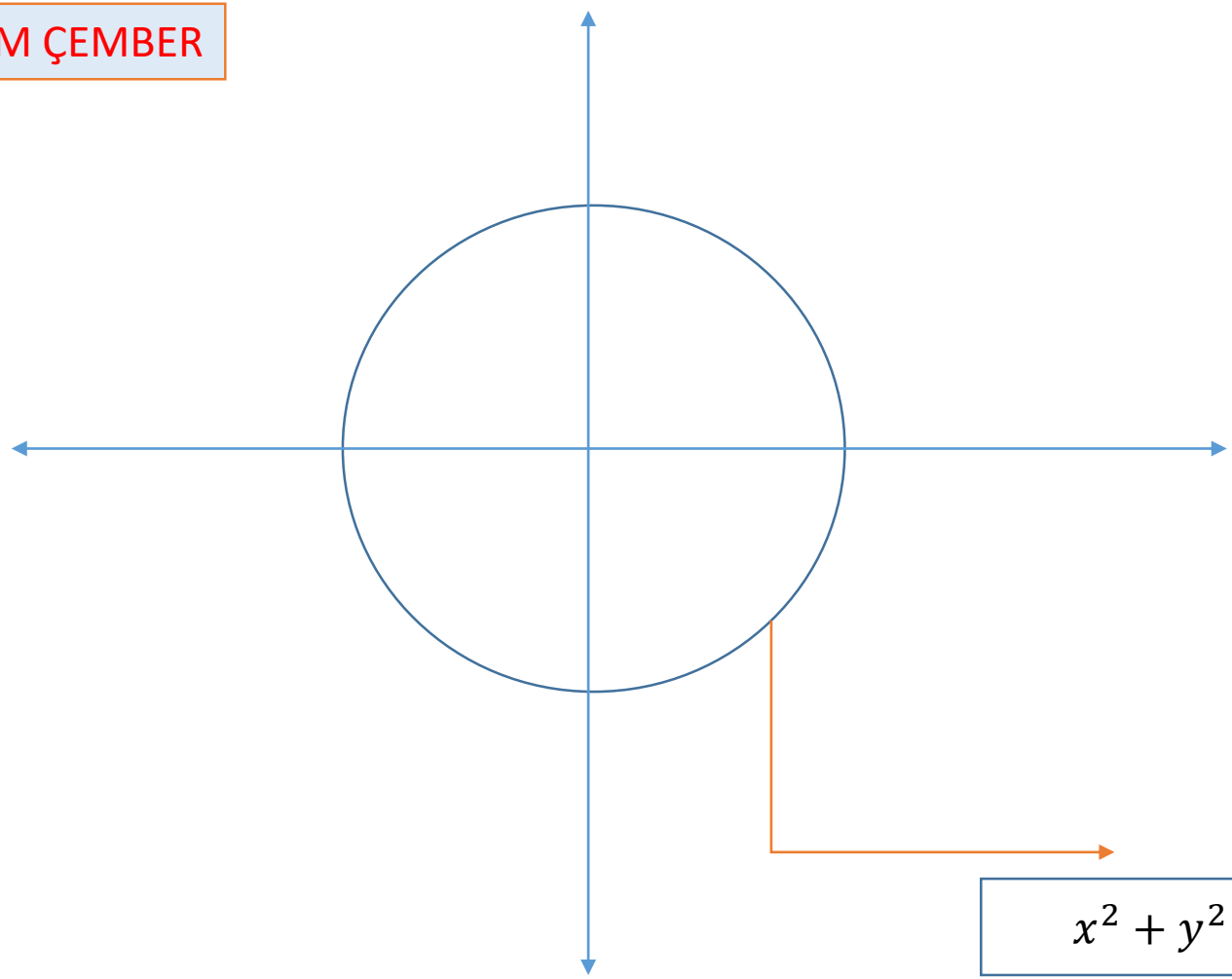
BİRİM ÇEMBER



$$x^2 + y^2 = 1$$

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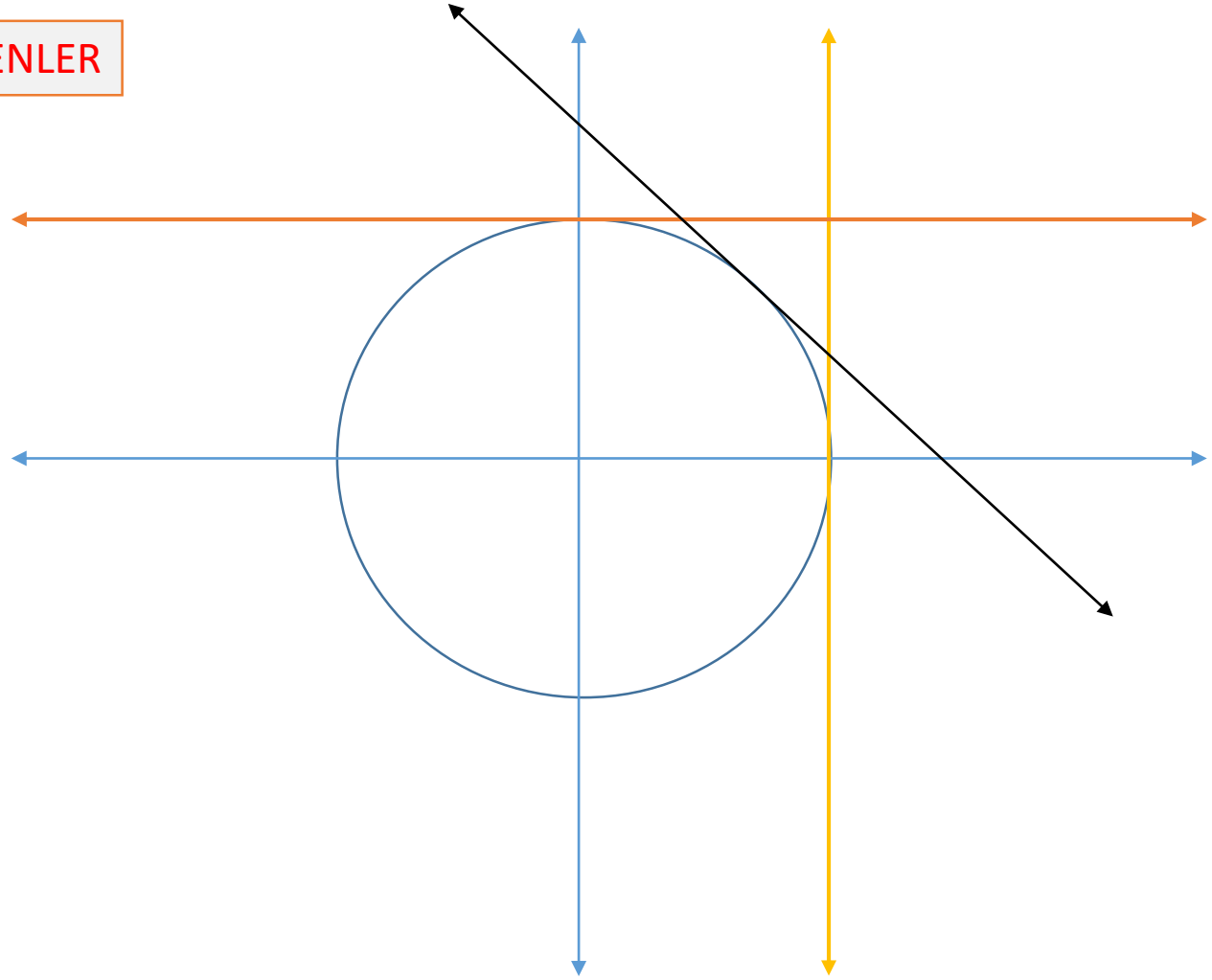
EKSENLER



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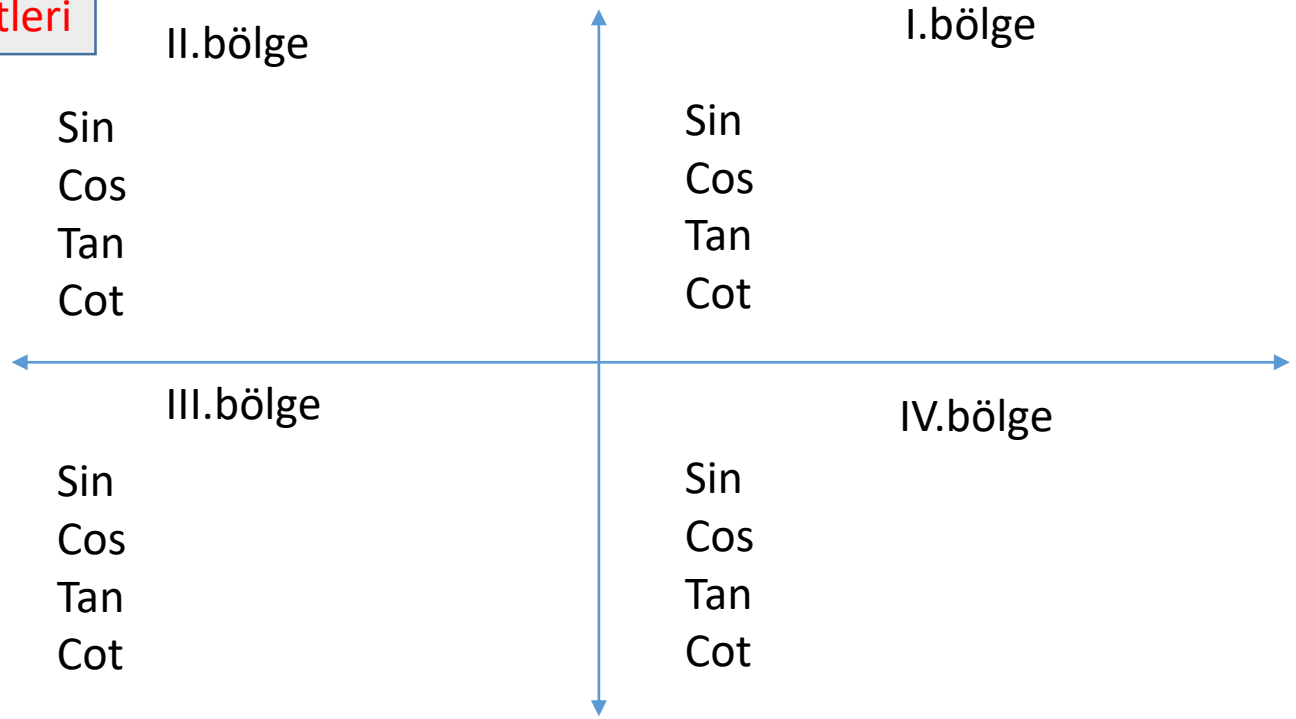
Bölgelerin işaretleri



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Değer Aralığı

1) $-1 \leq \sin x \leq 1$

2) $-1 \leq \cos x \leq 1$

3) $-\infty < \tan x < \infty$

4) $-\infty < \cot x < \infty$

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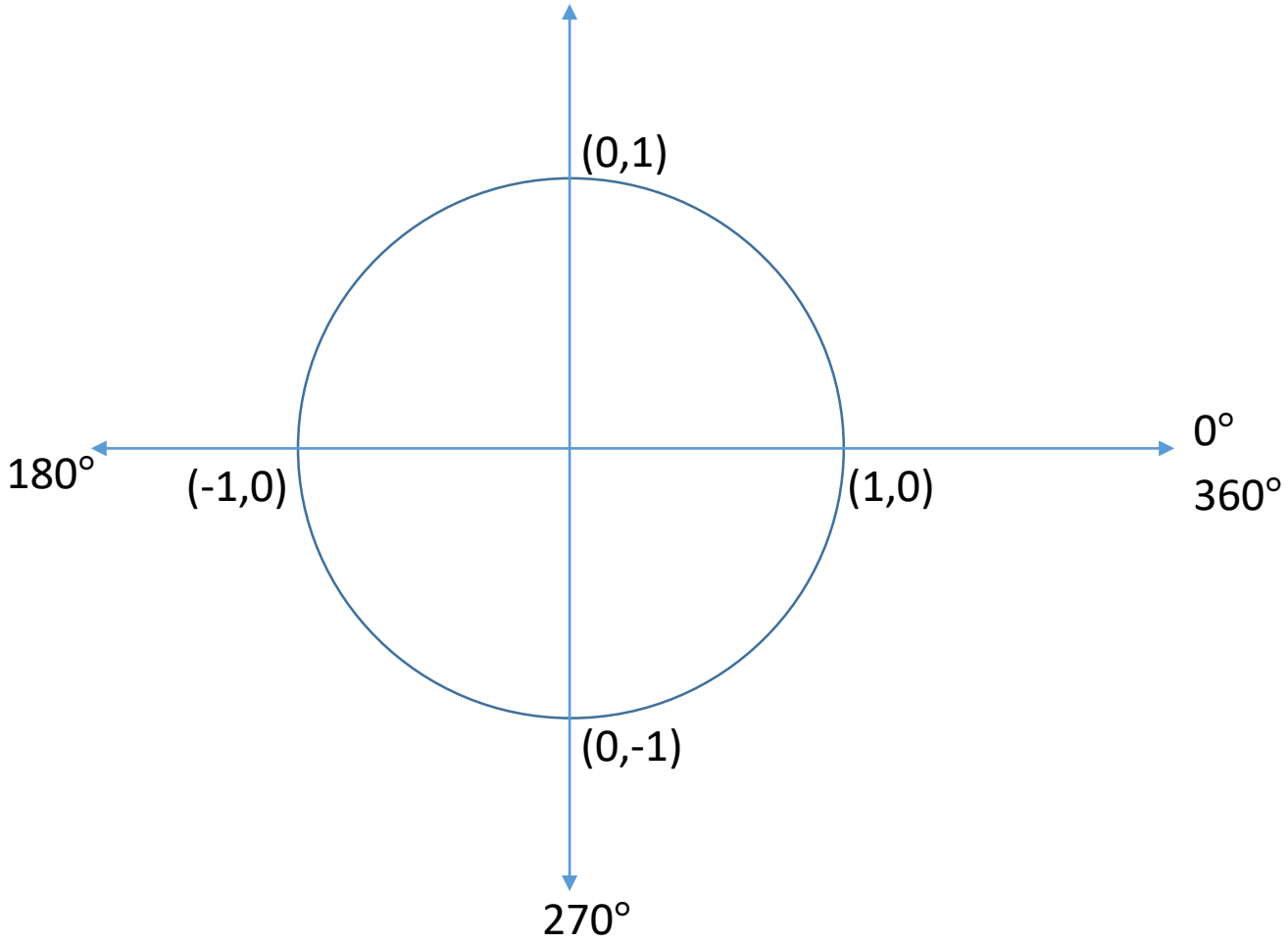

Cos değerleri

Sin değerleri

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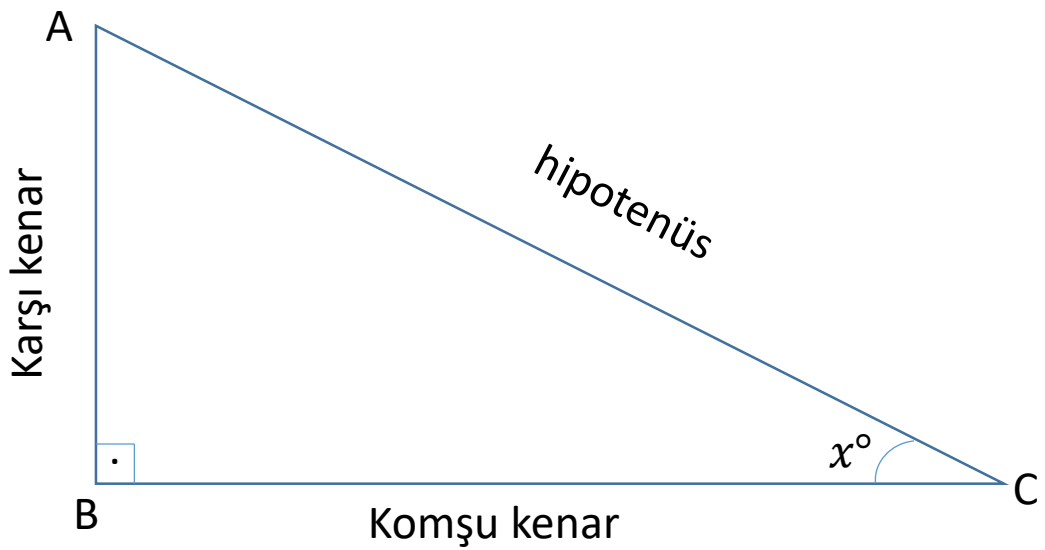
DİK ÜÇGENDE TRİGONOMETRİK ORANLAR



$$\sin x = \frac{karşı}{hipotenüs}$$

$$\tan x = \frac{karşı}{komşu}$$

$$\cos x = \frac{komşu}{hipotenüs}$$

$$\cot x = \frac{komşu}{karşı}$$

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TRİGONOMETRİK
ÖZDEŞLİKLER

$$\sin^2 x + \cos^2 x = 1$$

$$\sin^2 x = 1 - \cos^2 x \longrightarrow \sin^2 x = (1 - \cos x)(1 + \cos x)$$

$$\cos^2 x = 1 - \sin^2 x \longrightarrow \cos^2 x = (1 - \sin x)(1 + \sin x)$$

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$$\tan x = \frac{\sin x}{\cos x} \qquad \cot x = \frac{\cos x}{\sin x}$$

$$\tan x \,.\, \cot x = 1$$

$$\tan x = \frac{1}{\cot x} \qquad \cot x = \frac{1}{\tan x}$$

$$\sec x = \frac{1}{\cos x} \qquad \csc x = \frac{1}{\sin x}$$

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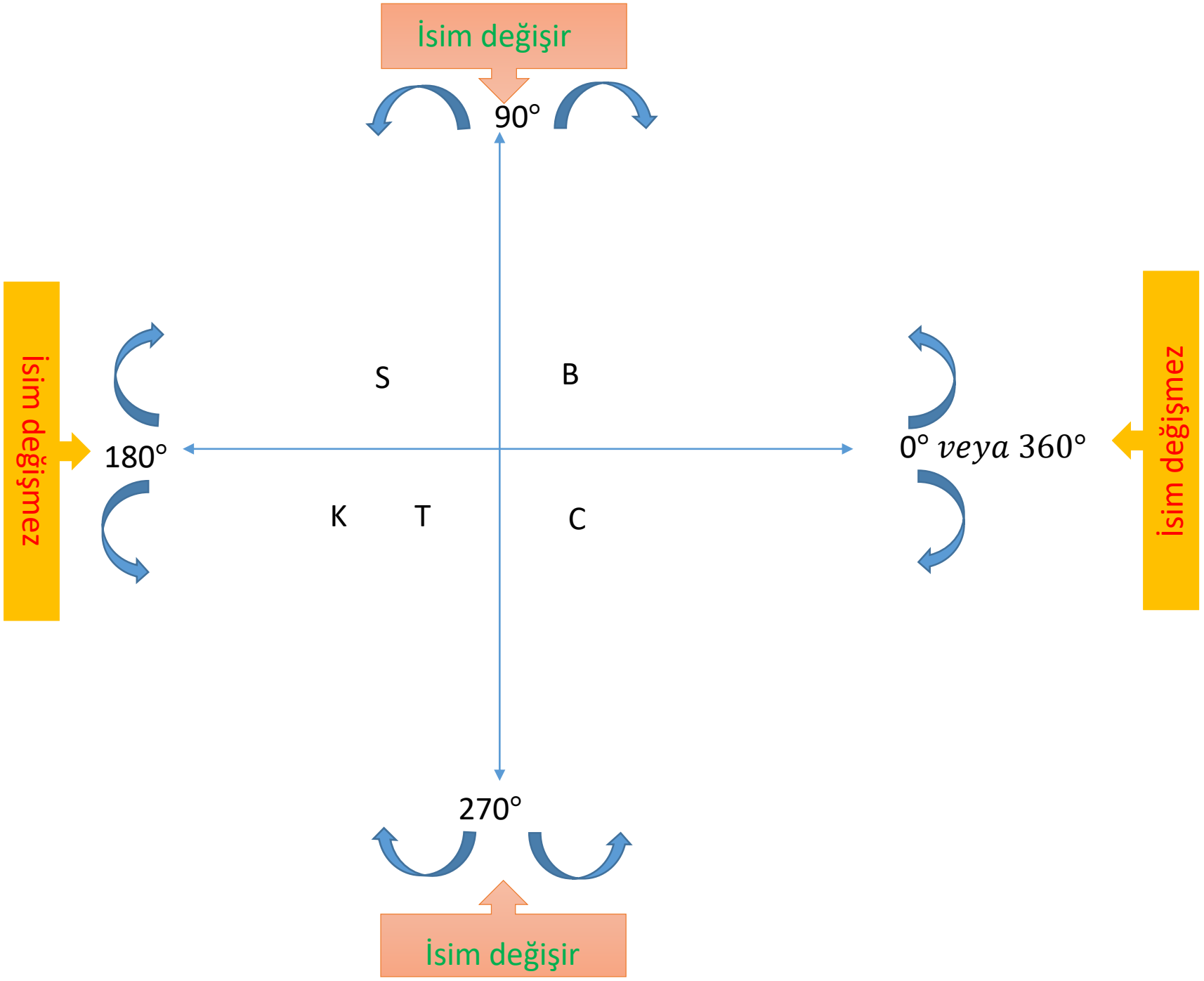

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NOT

$\sin(-x)=$

$\cos(-x)=$

$\tan(-x)=$

$\cot(-x)=$

$\sec(-x)=$

$\csc(-x)=$

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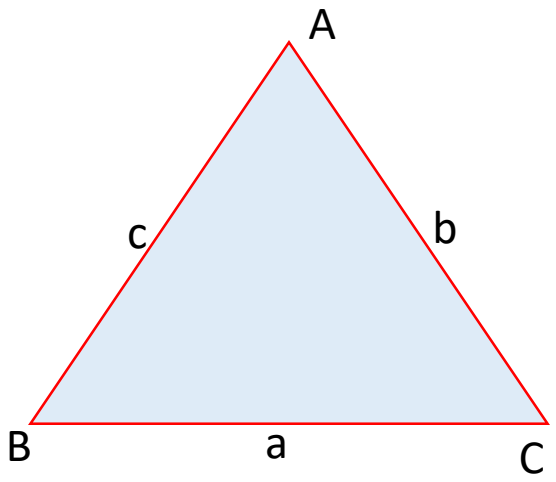
Cosinus Teoremi



$$a^2 = b^2 + c^2 - 2.b.c.\cos\hat{A}$$

$$b^2 = a^2 + c^2 - 2.a.c.\cos\hat{B}$$

$$c^2 = a^2 + b^2 - 2.a.b.\cos\hat{C}$$

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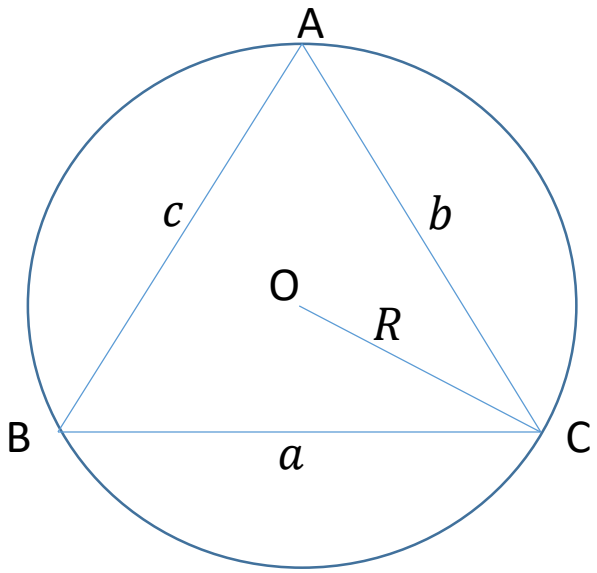
Sinüs Teoremi



ABC üçgeninin çevrel çemberinin yarıçapı R olmak üzere

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = 2R$$

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TRİONOMETRİK FONKSİYONLARIN PERİYOTLARI

$$f(x) = k\sin^{2n+1}(ax+b)+m$$
$$f(x) = k\cos^{2n+1}(ax+b)+m$$

$$T = \frac{2\pi}{|a|}$$

$$f(x) = k\sin^{2n}(ax+b)+m$$
$$f(x) = k\cos^{2n}(ax+b)+m$$

$$T = \frac{\pi}{|a|}$$

$$f(x) = k\tan^{n}(ax+b)+m$$
$$f(x) = k\cot^{n}(ax+b)+m$$

$$T = \frac{\pi}{|a|}$$

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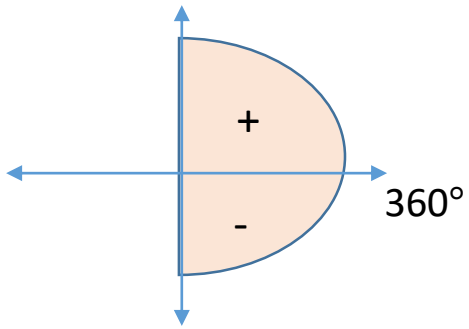
Ters trigonometrik fonksiyonlar

$\sin x = y \quad <=> \quad arcsiny = x$

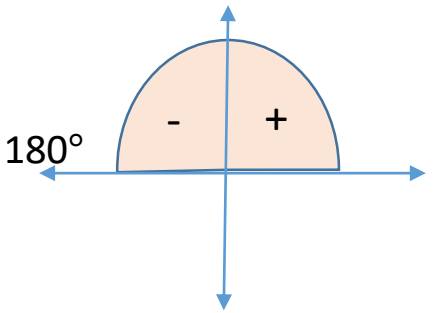
$\cos x = y \quad <=> \quad arccosy = x$

$\tan x = y \quad <=> \quad arctany = x$

$\sin x \ ve \ \tan x$



$\cos x \ ve \ \cot x$



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