연쇄변환법

[1] 주기 무변환 [2] 기함수 부호변환 [3] 우함수 부호무변환 [4] 원점대칭 부호변환 [5] 함수 변환

$\sin\left(\theta+\frac{\pi}{2}\right) \rightarrow \sin\left(\frac{\pi}{2}-(-\theta)\right) \rightarrow \cos(-\theta) \rightarrow \cos\theta$ [5] [3]

$\sin\left(\theta+\frac{\pi}{2}\right) \rightarrow -\sin\left(\theta-\frac{\pi}{2}\right) \rightarrow \sin\left(\frac{\pi}{2}-\theta\right) \rightarrow \cos\theta$ [4] [2] [5]

$\cos\left(\theta+\frac{\pi}{2}\right) \rightarrow \cos\left(\frac{\pi}{2}-(-\theta)\right) \rightarrow \sin(-\theta) \rightarrow -\sin\theta$ [5] [2]

$\cos\left(\theta+\frac{\pi}{2}\right) \rightarrow -\cos\left(\theta-\frac{\pi}{2}\right) \rightarrow -\cos\left(\frac{\pi}{2}-\theta\right) \rightarrow -\sin\theta$ [4] [3] [5]

$\sin\left(-\theta+\frac{\pi}{2}\right) \rightarrow \cos\theta$ [5]

$\cos\left(-\theta+\frac{\pi}{2}\right) \rightarrow \sin\theta$ [5]

$\sin\left(\theta-\frac{\pi}{2}\right) \rightarrow -\sin\left(-\theta+\frac{\pi}{2}\right) \rightarrow -\cos\theta$ [2] [5]

$\cos\left(\theta-\frac{\pi}{2}\right) \rightarrow \cos\left(-\theta+\frac{\pi}{2}\right) \rightarrow \sin\theta$ [3] [5]

$\sin\left(-\theta-\frac{\pi}{2}\right) \rightarrow -\sin\left(-\theta+\frac{\pi}{2}\right) \rightarrow -\cos\theta$ [4] [5]

$\cos\left(-\theta-\frac{\pi}{2}\right) \rightarrow -\cos\left(-\theta+\frac{\pi}{2}\right) \rightarrow -\sin\theta$ [4] [5]

$\sin(\theta+\pi) \rightarrow -\sin\theta$ [4]

$\cos(\theta+\pi) \rightarrow -\cos\theta$ [4]

$\sin(-\theta+\pi) \rightarrow -\sin(-\theta) \rightarrow \sin\theta$ [4] [2]

$\cos(-\theta+\pi) \rightarrow -\cos(-\theta) \rightarrow -\cos\theta$ [4] [3]

$\sin(\theta-\pi) \rightarrow -\sin\theta$ [4]

$\cos(\theta-\pi) \rightarrow -\cos\theta$ [4]

$\sin(-\theta-\pi) \rightarrow -\sin(-\theta) \rightarrow \sin\theta$ [4] [2]

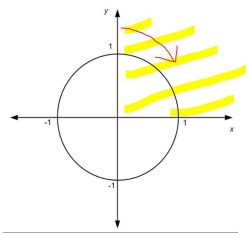
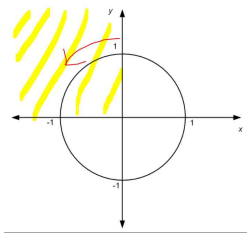
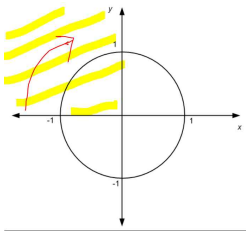
$\cos(-\theta-\pi) \rightarrow -\cos(-\theta) \rightarrow -\cos\theta$ [4] [3]

$\sin\left(\theta+\frac{3}{2}\pi\right)$ $\cos\left(\theta+\frac{3}{2}\pi\right)$ $\sin\left(-\theta+\frac{3}{2}\pi\right)$ $\cos\left(-\theta+\frac{3}{2}\pi\right)$

$\sin\left(\theta-\frac{3}{2}\pi\right)$ $\cos\left(\theta-\frac{3}{2}\pi\right)$ $\sin\left(-\theta-\frac{3}{2}\pi\right)$ $\cos\left(-\theta-\frac{3}{2}\pi\right)$

2π 또는 -2π를 더하는 [1]을 하거나
π 또는 $-\pi$를 더하고 부호를 바꾸는 [4]를 해서
$\pm\sin\left(\pm\frac{\pi}{2}\pm\theta\right)$, $\pm\cos\left(\pm\frac{\pi}{2}\pm\theta\right)$ 으로 변환하고 앞 페이지와 똑같이 변환

예각가정법

<1>		<2-1>		<2-2>	
					
$\sin > 0$	$\cos > 0$	$\sin > 0$	$\cos < 0$	$\sin > 0$	$\cos < 0$
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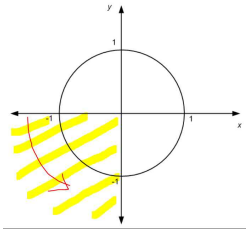
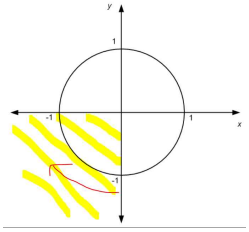
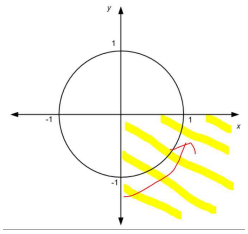
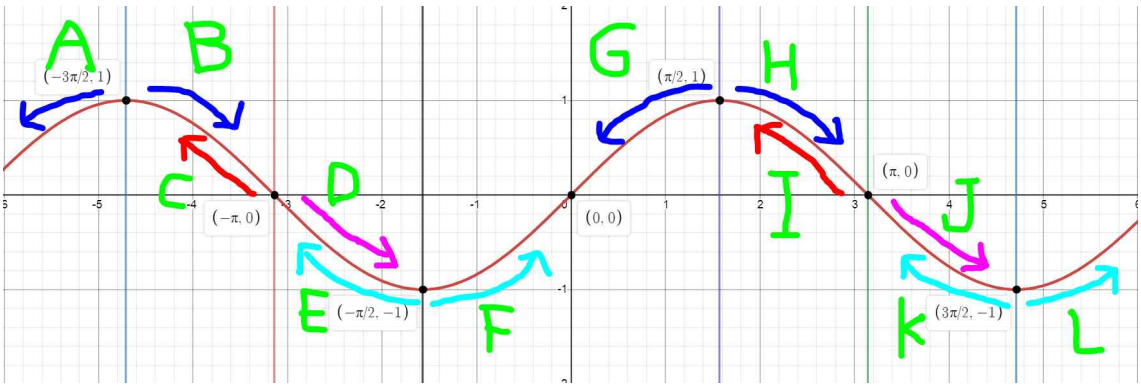
					
$\sin < 0$	$\cos < 0$	$\sin < 0$	$\cos < 0$	$\sin < 0$	$\cos > 0$

$\sin\left(\theta+\frac{\pi}{2}\right)$	<2-1>	홀	$\cos\theta$
$\cos\left(\theta+\frac{\pi}{2}\right)$	<2-1>	홀	$-\sin\theta$
$\sin\left(-\theta+\frac{\pi}{2}\right)$	<1>	홀	$\cos\theta$
$\cos\left(-\theta+\frac{\pi}{2}\right)$	<1>	홀	$\sin\theta$
$\sin\left(\theta-\frac{\pi}{2}\right)$	<4>	홀	$-\cos\theta$
$\cos\left(\theta-\frac{\pi}{2}\right)$	<4>	홀	$\sin\theta$
$\sin\left(-\theta-\frac{\pi}{2}\right)$	<3-2>	홀	$-\cos\theta$
$\cos\left(-\theta-\frac{\pi}{2}\right)$	<3-2>	홀	$-\sin\theta$

$\sin\left(\theta+\frac{3}{2}\pi\right)$	<4>	홀	$-\cos\theta$
$\cos\left(\theta+\frac{3}{2}\pi\right)$	<4>	홀	$\sin\theta$
$\sin\left(-\theta+\frac{3}{2}\pi\right)$	<3-2>	홀	$-\cos\theta$
$\cos\left(-\theta+\frac{3}{2}\pi\right)$	<3-2>	홀	$-\sin\theta$
$\sin\left(\theta-\frac{3}{2}\pi\right)$	<2-1>	홀	$\cos\theta$
$\cos\left(\theta-\frac{3}{2}\pi\right)$	<2-1>	홀	$-\sin\theta$
$\sin\left(-\theta-\frac{3}{2}\pi\right)$	<1>	홀	$\cos\theta$
$\cos\left(-\theta-\frac{3}{2}\pi\right)$	<1>	홀	$\sin\theta$

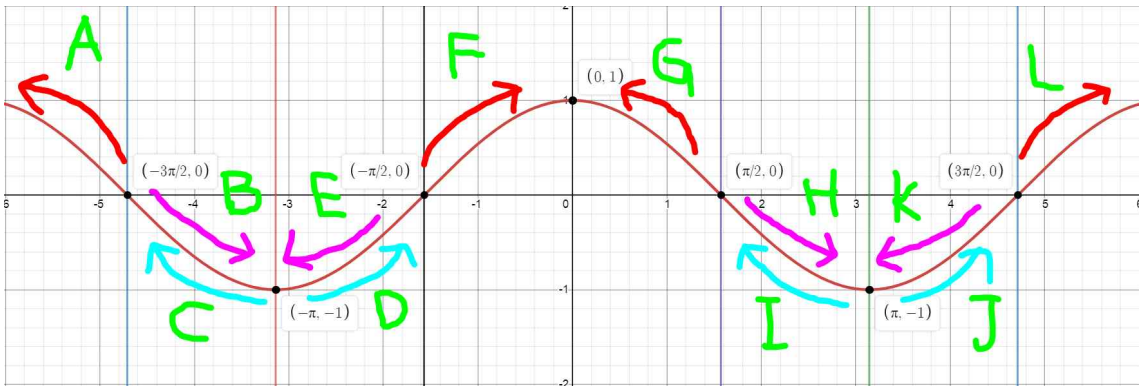
$\sin(\theta+\pi)$	<3-1>	짝	$-\sin\theta$
$\cos(\theta+\pi)$	<3-1>	짝	$-\cos\theta$
$\sin(-\theta+\pi)$	<2-2>	짝	$\sin\theta$
$\cos(-\theta+\pi)$	<2-2>	짝	$-\cos\theta$
$\sin(\theta-\pi)$	<3-1>	짝	$-\sin\theta$
$\cos(\theta-\pi)$	<3-1>	짝	$-\cos\theta$
$\sin(-\theta-\pi)$	<2-2>	짝	$\sin\theta$
$\cos(-\theta-\pi)$	<2-2>	짝	$-\cos\theta$

그래프 도시법



$\sin\left(\theta+\frac{\pi}{2}\right)$	H	$\sin(\theta+\pi)$	J	$\sin\left(\theta+\frac{3}{2}\pi\right)$	L
$\sin\left(-\theta+\frac{\pi}{2}\right)$	G	$\sin(-\theta+\pi)$	I	$\sin\left(-\theta+\frac{3}{2}\pi\right)$	K
$\sin\left(\theta-\frac{\pi}{2}\right)$	F	$\sin(\theta-\pi)$	D	$\sin\left(\theta-\frac{3}{2}\pi\right)$	B
$\sin\left(-\theta-\frac{\pi}{2}\right)$	E	$\sin(-\theta-\pi)$	C	$\sin\left(-\theta-\frac{3}{2}\pi\right)$	A

A B G H $=\cos\theta$ C I $=\sin\theta$ D J $=-\sin\theta$ E F K L $=-\cos\theta$



$\cos\left(\theta+\frac{\pi}{2}\right)$	H	$\cos(\theta+\pi)$	J	$\cos\left(\theta+\frac{3}{2}\pi\right)$	L
$\cos\left(-\theta+\frac{\pi}{2}\right)$	G	$\cos(-\theta+\pi)$	I	$\cos\left(-\theta+\frac{3}{2}\pi\right)$	K
$\cos\left(\theta-\frac{\pi}{2}\right)$	F	$\cos(\theta-\pi)$	D	$\cos\left(\theta-\frac{3}{2}\pi\right)$	B
$\cos\left(-\theta-\frac{\pi}{2}\right)$	E	$\cos(-\theta-\pi)$	C	$\cos\left(-\theta-\frac{3}{2}\pi\right)$	A

A F G L $=\sin\theta$ B E H K $=-\sin\theta$ C D I J $=-\cos\theta$