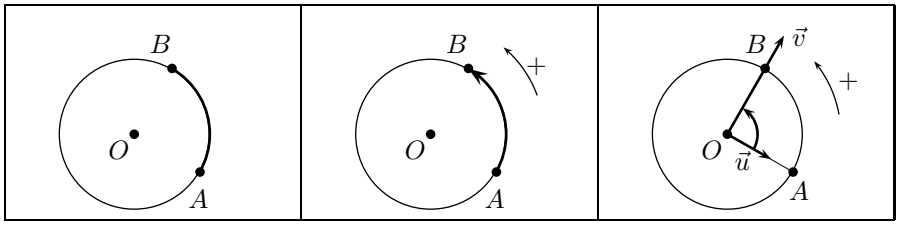
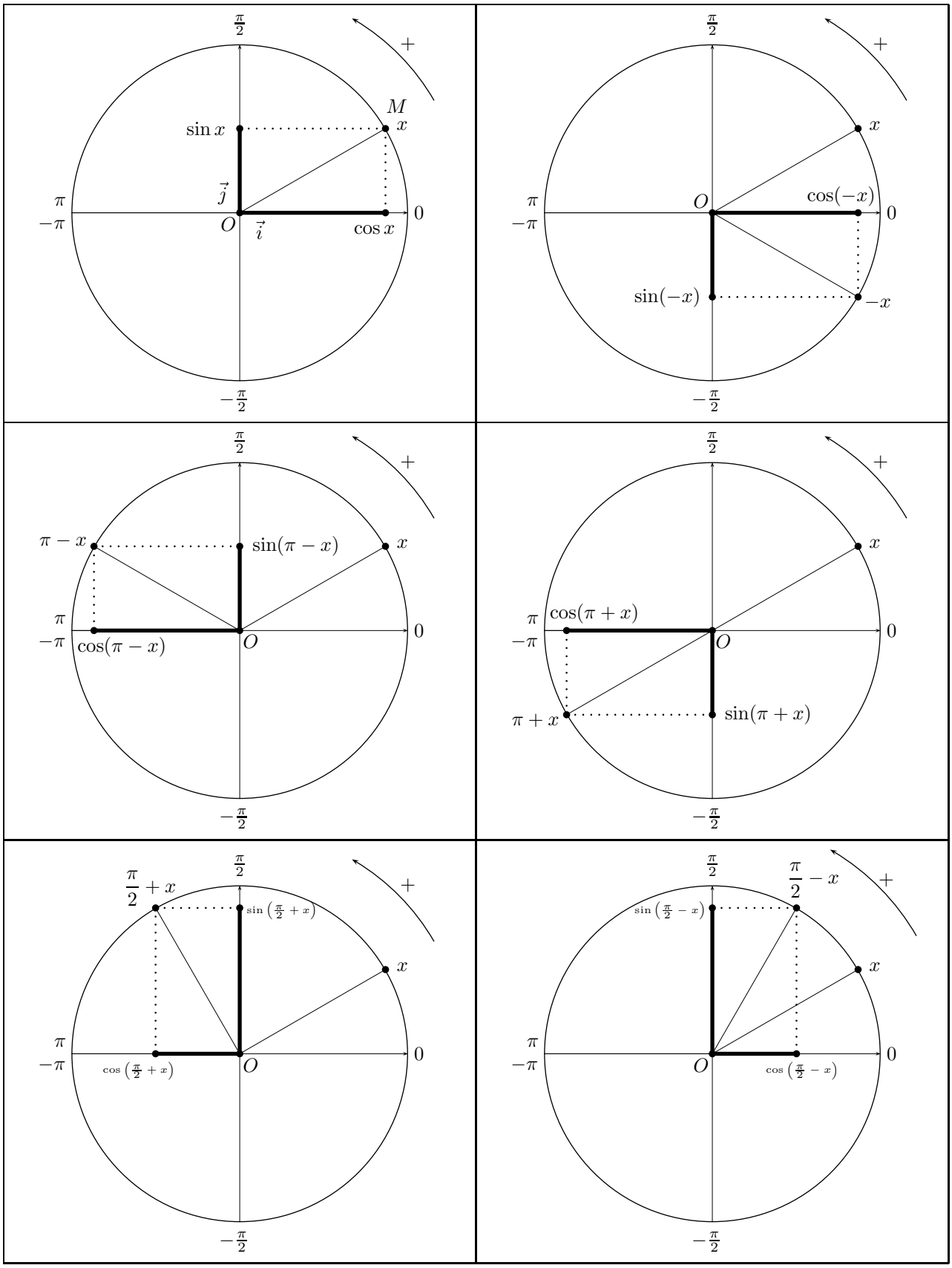
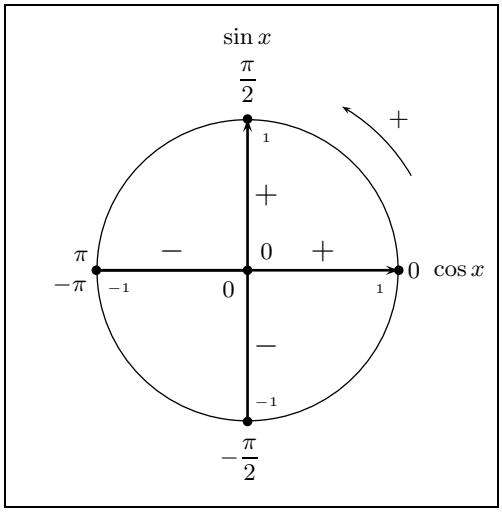
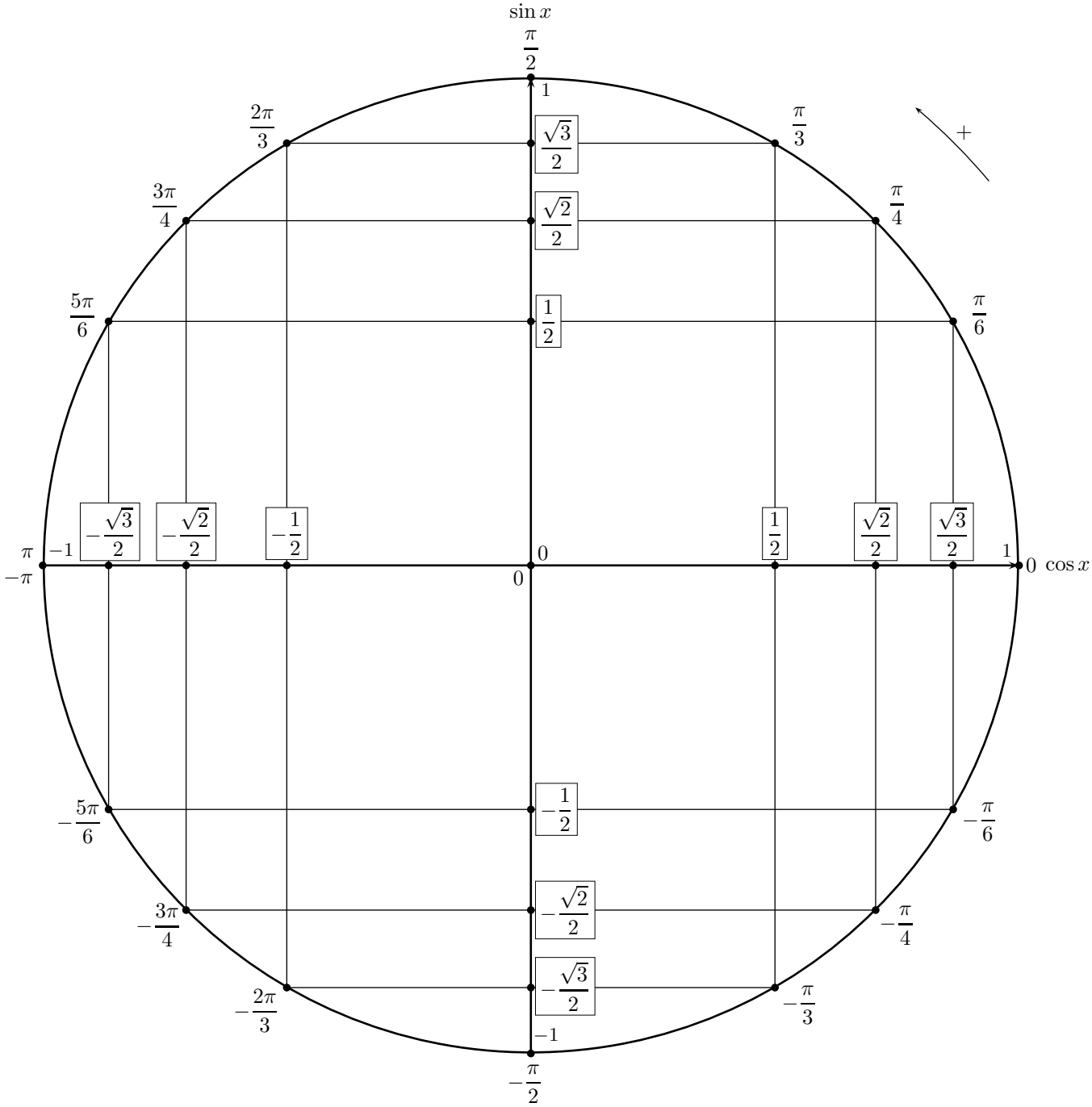
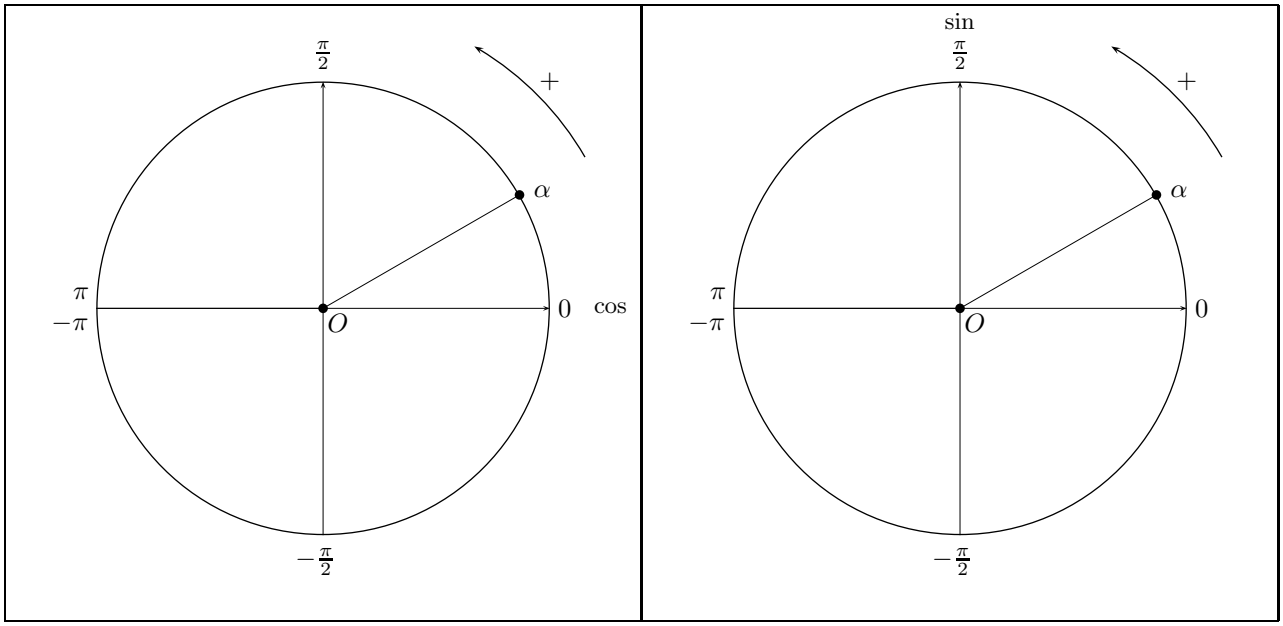
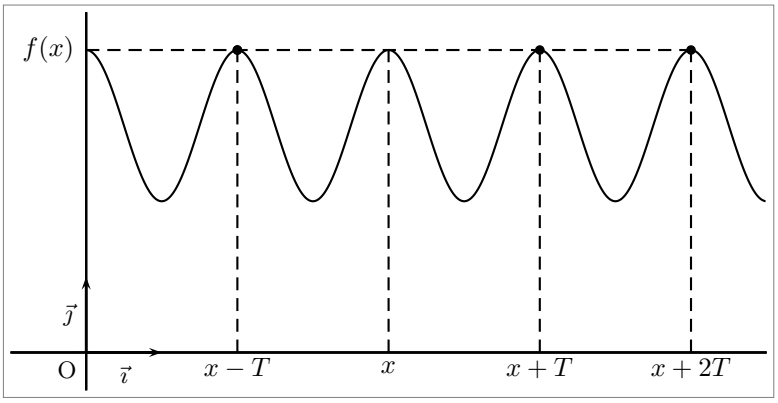

B
O
A
B
+
O
A
B
$\vec{v}$
+
O
$\vec{u}$
A

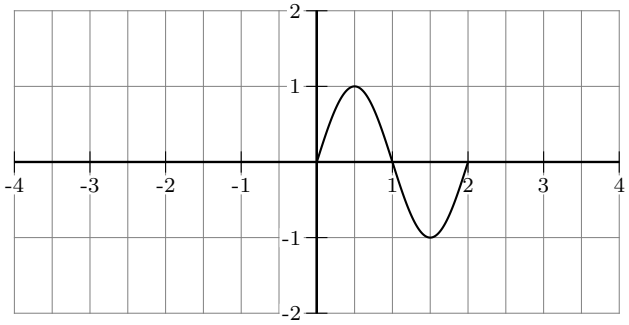

$\frac{\pi}{2}$
+
M
$\sin x$
x
$\vec{j}$
π
$-\pi$
O
$\vec{i}$
$\cos x$
0
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
+
x
π
$-\pi$
O
$\cos(-x)$
0
$\sin(-x)$
$-x$
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
+
$\pi - x$
$\sin(\pi - x)$
x
π
$-\pi$
$\cos(\pi - x)$
O
0
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
+
x
π
$\cos(\pi + x)$
$-\pi$
O
0
$\pi + x$
$\sin(\pi + x)$
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
$\frac{\pi}{2} + x$
$\frac{\pi}{2}$
+
$\sin\left(\frac{\pi}{2} + x\right)$
x
π
$-\pi$
$\cos\left(\frac{\pi}{2} + x\right)$
O
0
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
$\frac{\pi}{2} - x$
+
$\sin\left(\frac{\pi}{2} - x\right)$
x
π
$-\pi$
O
$\cos\left(\frac{\pi}{2} - x\right)$
0
$-\frac{\pi}{2}$

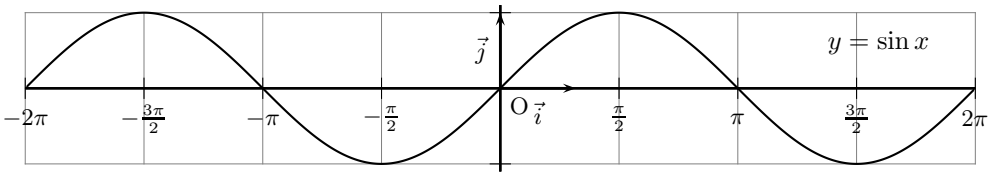

$\sin x$
$\frac{\pi}{2}$
$+$
1
$+$
π
$-$
0
$+$
0
$\cos x$
$-\pi$
-1
0
1
$-$
-1
$-\frac{\pi}{2}$

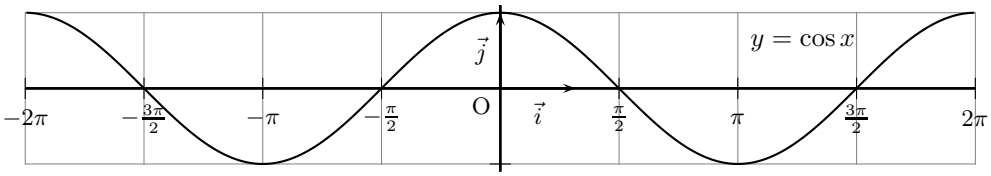

$\sin x$
$\frac{\pi}{2}$
1
$\frac{2\pi}{3}$
$\frac{\sqrt{3}}{2}$
$\frac{\pi}{3}$
$+$
$\frac{3\pi}{4}$
$\frac{\sqrt{2}}{2}$
$\frac{\pi}{4}$
$\frac{5\pi}{6}$
$\frac{1}{2}$
$\frac{\pi}{6}$
$-\frac{\sqrt{3}}{2}$
$-\frac{\sqrt{2}}{2}$
$-\frac{1}{2}$
$\frac{1}{2}$
$\frac{\sqrt{2}}{2}$
$\frac{\sqrt{3}}{2}$
π
-1
0
1
0
$\cos x$
$-\pi$
0
$-\frac{5\pi}{6}$
$-\frac{1}{2}$
$-\frac{\pi}{6}$
$-\frac{3\pi}{4}$
$-\frac{\sqrt{2}}{2}$
$-\frac{\pi}{4}$
$-\frac{2\pi}{3}$
$-\frac{\sqrt{3}}{2}$
$-\frac{\pi}{3}$
-1
$-\frac{\pi}{2}$


$\frac{\pi}{2}$
+
α
π
$-\pi$
O
0
cos
$-\frac{\pi}{2}$
sin
$\frac{\pi}{2}$
+
α
π
$-\pi$
O
0
$-\frac{\pi}{2}$


$f(x)$
$\vec{j}$
O
$\vec{i}$
$x-T$
x
$x+T$
$x+2T$


2
1
-1
-2
-4
-3
-2
-1
1
2
3
4


$y = \sin x$
$\vec{j}$
O
$\vec{i}$
-2π
$-\frac{3\pi}{2}$
$-\pi$
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
π
$\frac{3\pi}{2}$
2π


$y = \cos x$
$\vec{j}$
O
$\vec{i}$
-2π
$-\frac{3\pi}{2}$
$-\pi$
$-\frac{\pi}{2}$
$\frac{\pi}{2}$
π
$\frac{3\pi}{2}$
2π