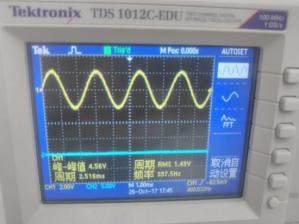
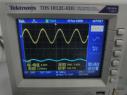
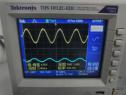
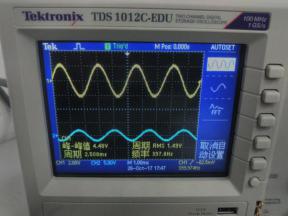
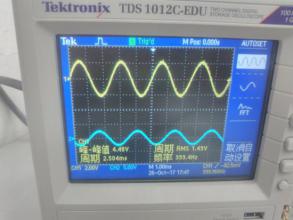
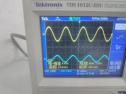
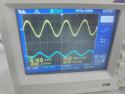
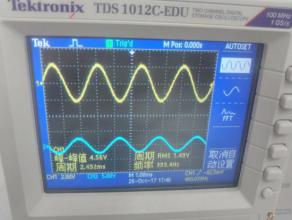
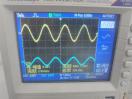
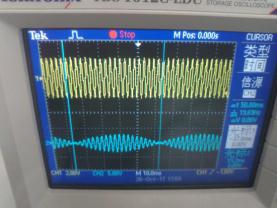
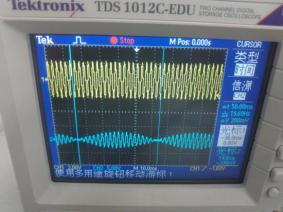
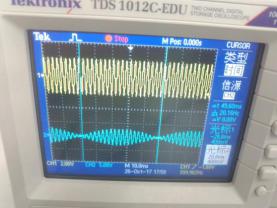
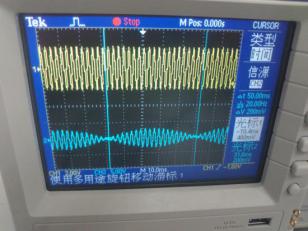
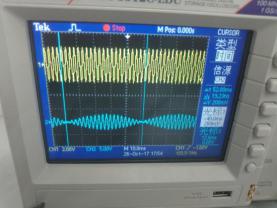
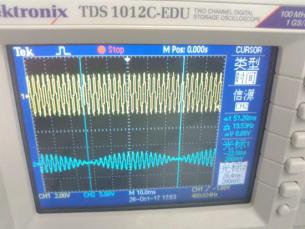
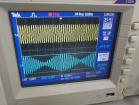
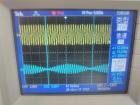
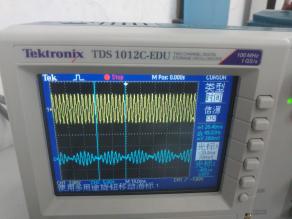
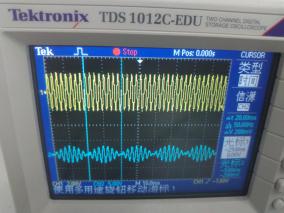
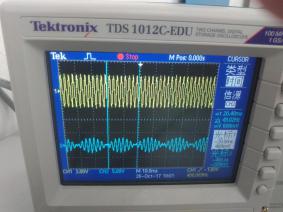
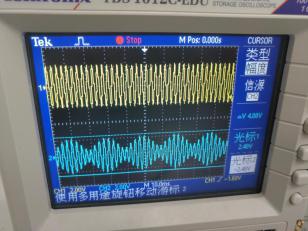
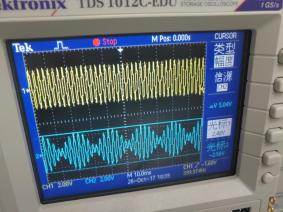
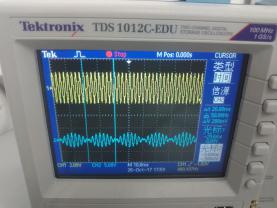
1.同频率正弦波的叠加。

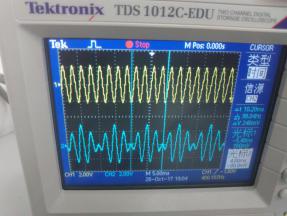
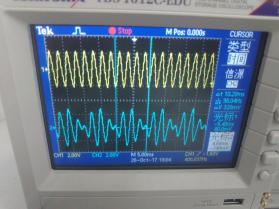
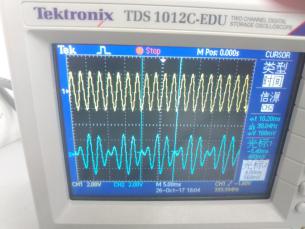
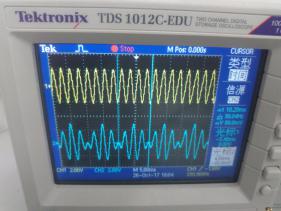
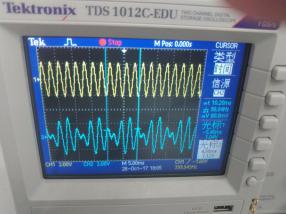
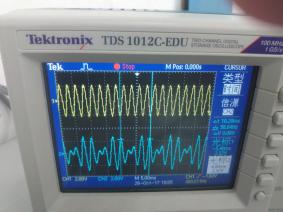
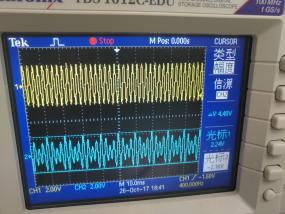
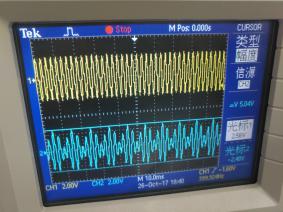
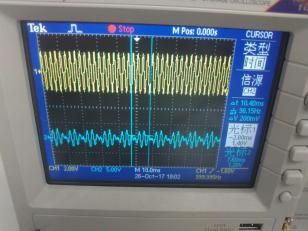


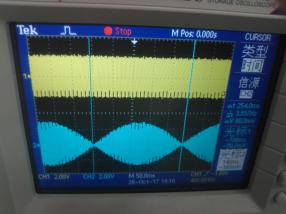
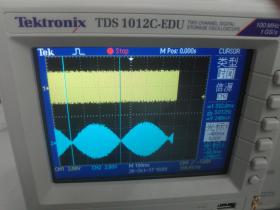
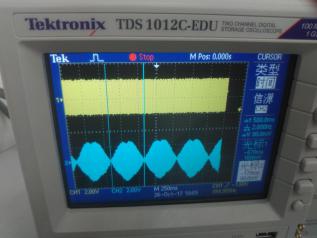
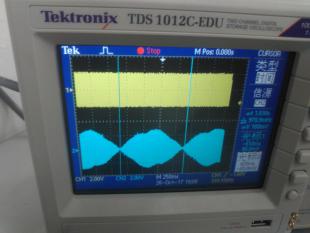
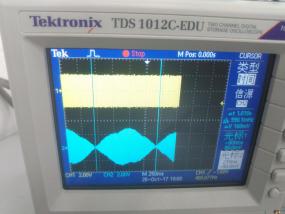
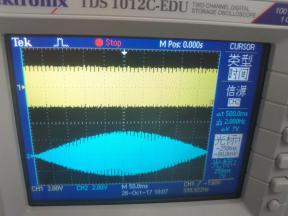
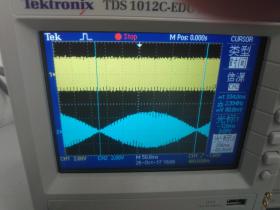
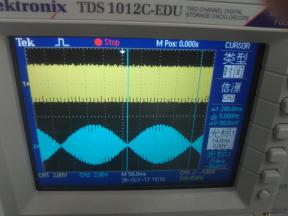
由上图，可发现同频率正弦波相叠加仍可得到同频率正弦波，振幅随相位差改变而改变，当相位差为π时，振幅降为0。

1. 不同频率正弦波的叠加



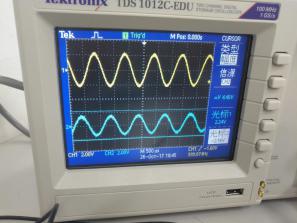
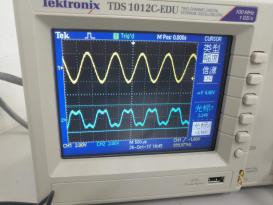
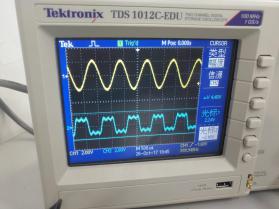
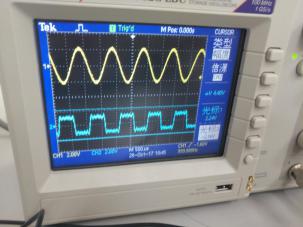




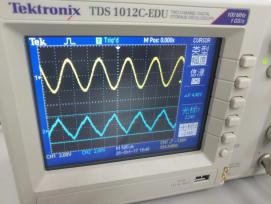


由上图，可发现以下几点：振幅相近时，叠加波拍频为两波频率之差；频率相近时，叠加波波腹处振幅为两波振幅之和。

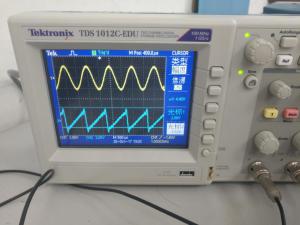
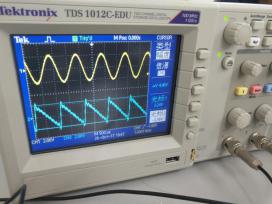
1. 傅里叶分析与吉布斯现象
2. 方波的合成与吉布斯现象



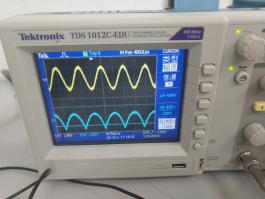
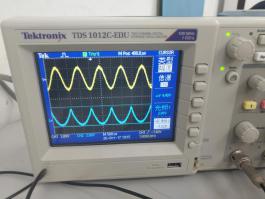
1. 三角波的合成



1. 锯齿波的合成及反向



1. 抛物线波的合成及反向

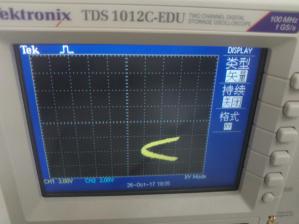
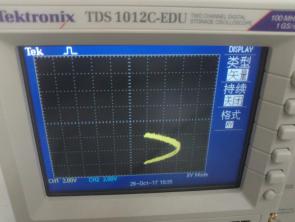


由上图，演示了任一周期性函数可被表述成一无限正弦函数的级数之和。

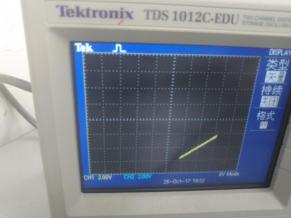
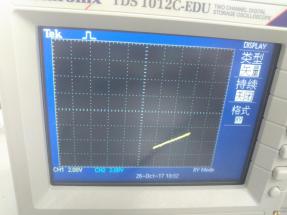
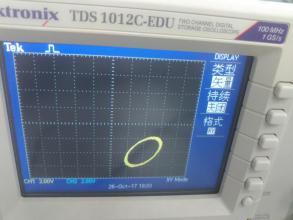
在进行方波叠加是，可发现会产生尖锐不连续的区间，区间宽度随合成的波的个数增加而变窄。

在进行波的反向实验时，采取了将各合成波相位增加π的方式。

1. 李萨如图







由上图，可发现两波振幅决定了李萨如图的横纵比。

当两波频率是整数比时，有稳定波形，每一x值对应的点数与每一y值对应的点数之比即为x对应波的频率与y对应波的频率之比。