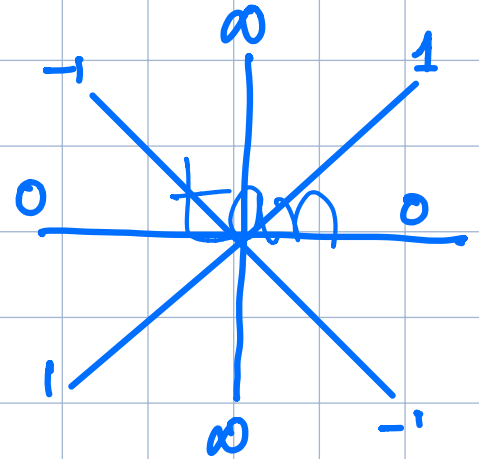
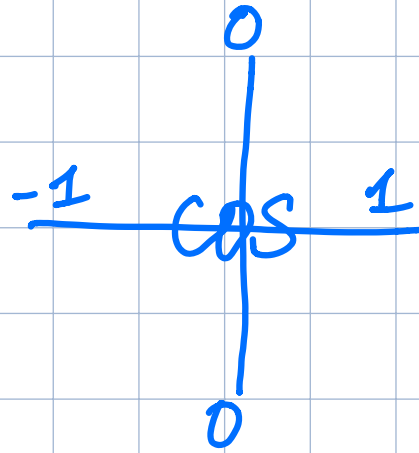
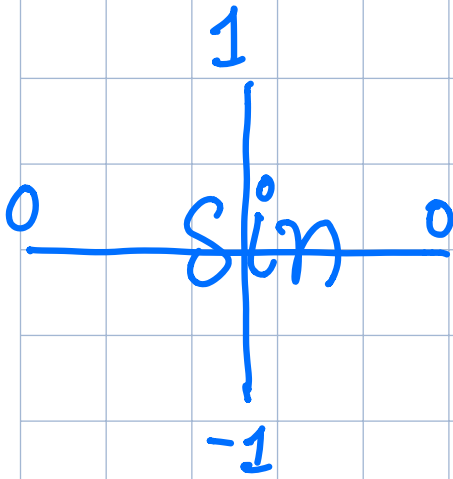


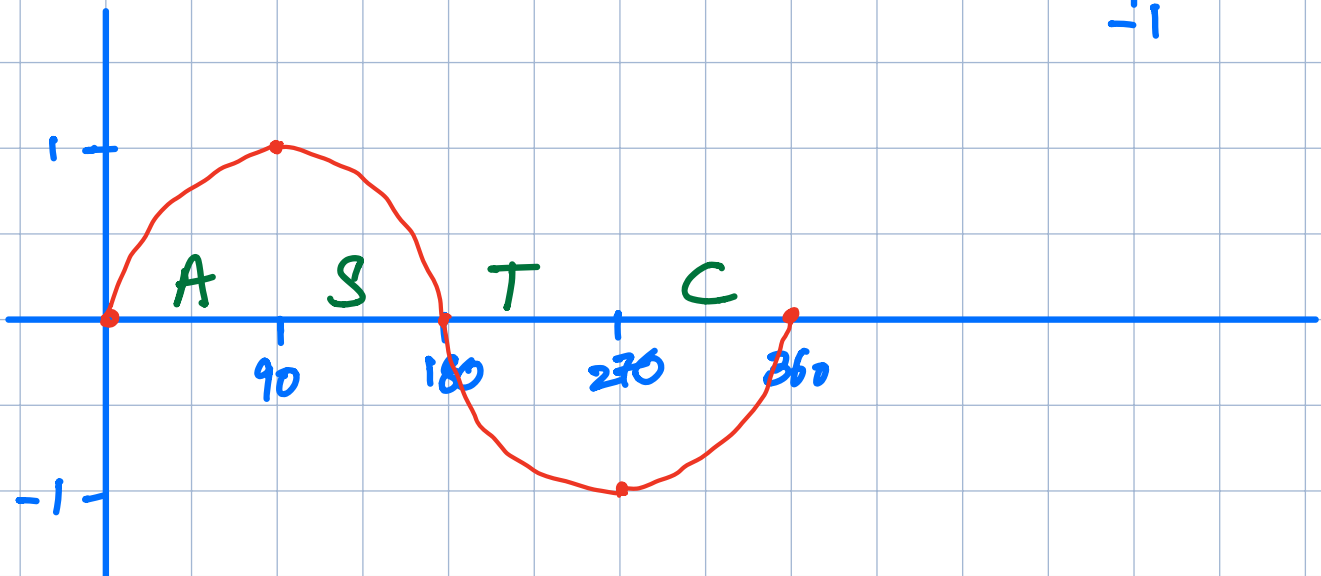
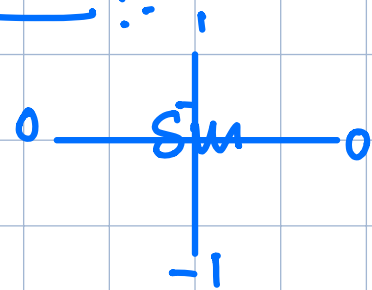
GRAPHS :-

GRIDS :

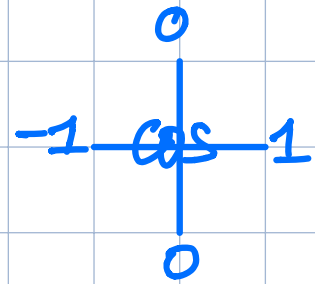
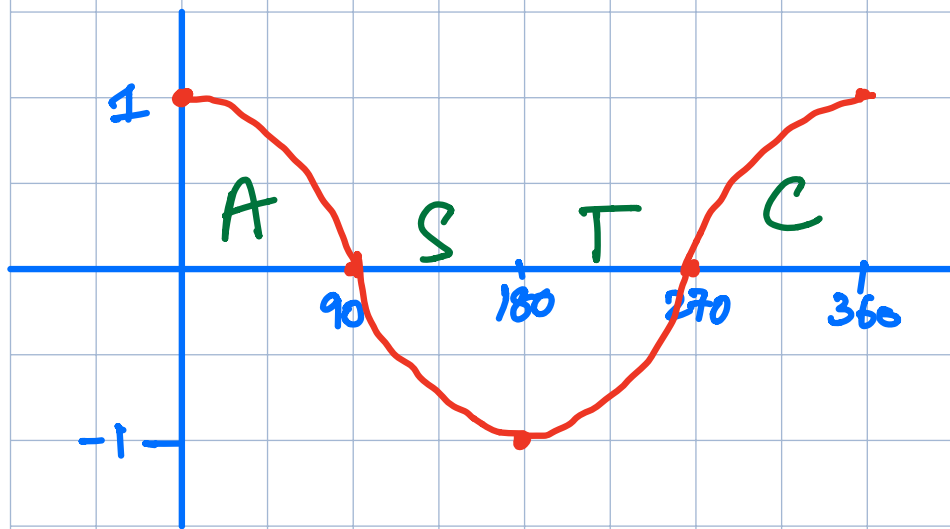


BASIC GRAPHS :-

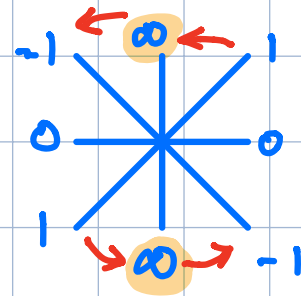
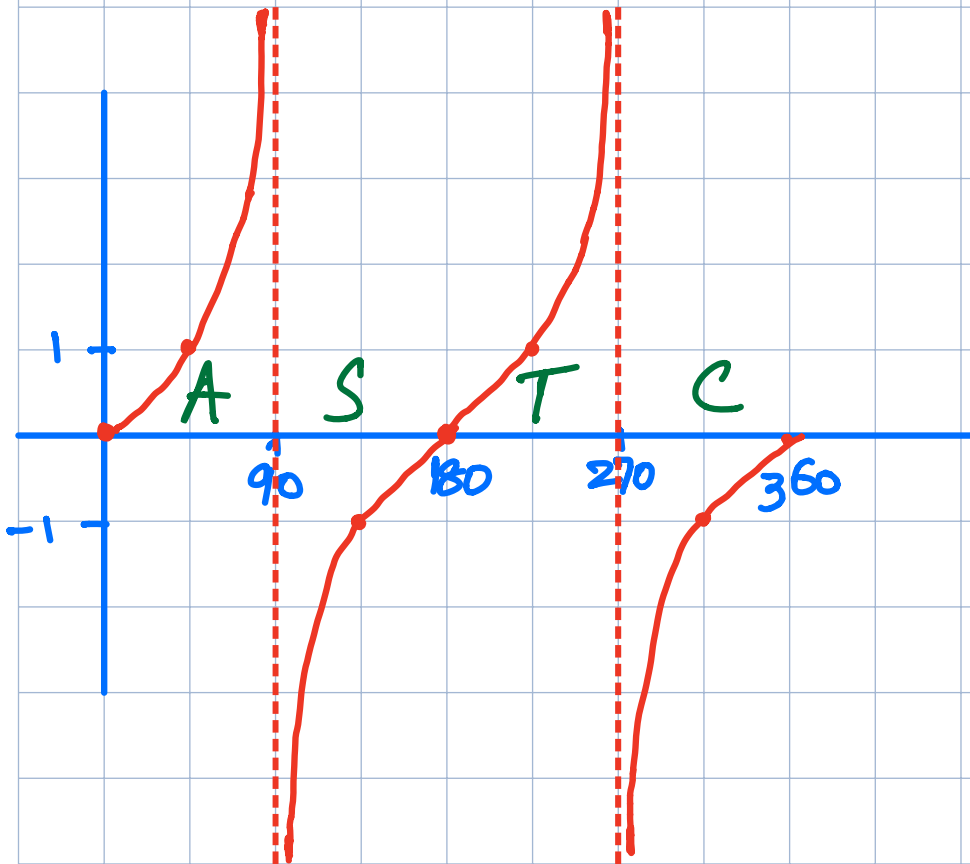
$$y = \sin x$$



$$y = \cos x$$

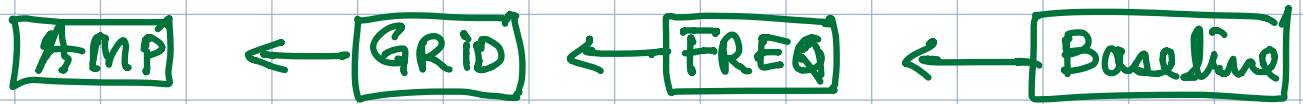


$$y = \tan x$$



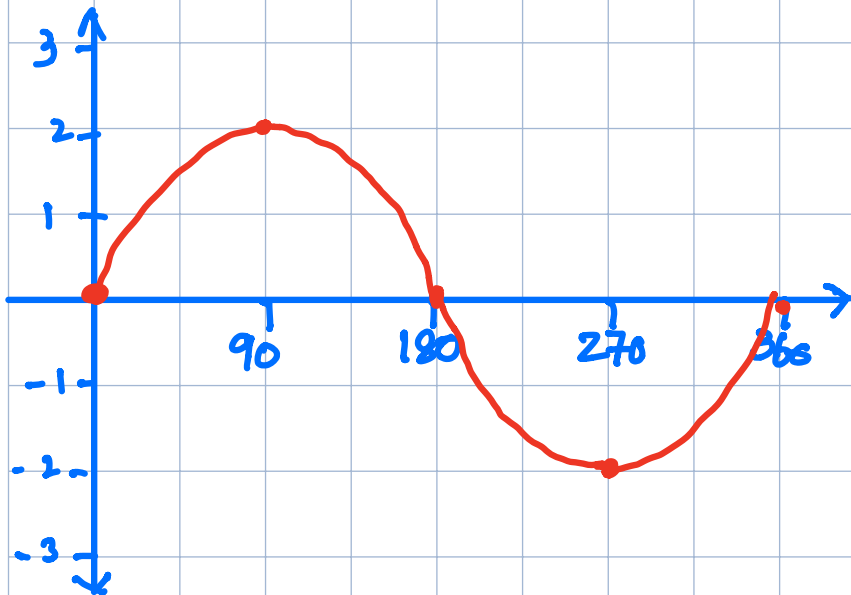
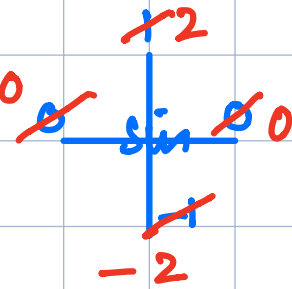
$$y = a \sin(bx) + c$$

AMPLITUDE (points to a)
 FREQUENCY No. of cycles in 360° (points to b)
 BASE LINE (points to c)

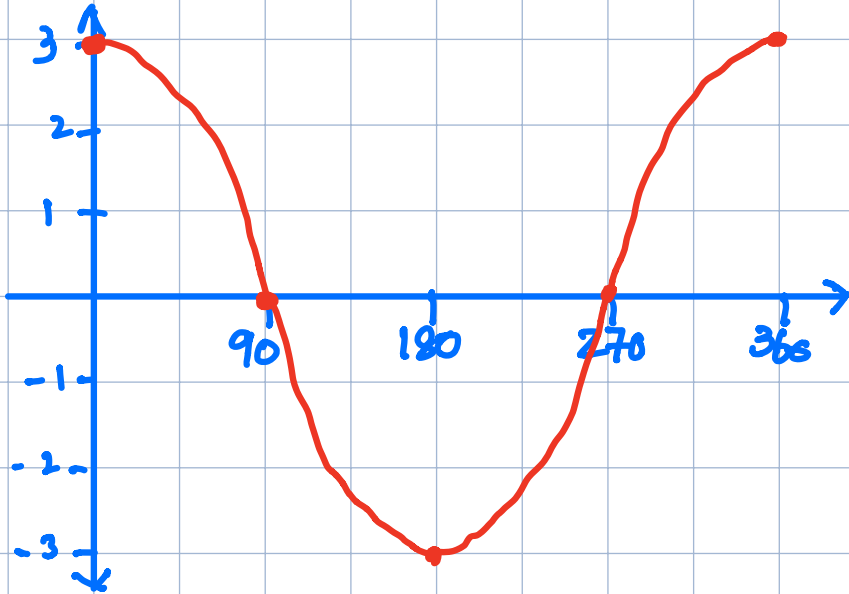
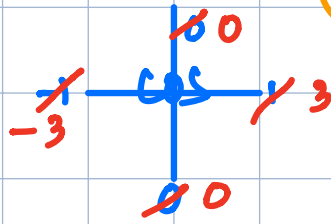


AMPLITUDE: (MULTIPLY WITH GRID).

$$y = 2 \sin x$$



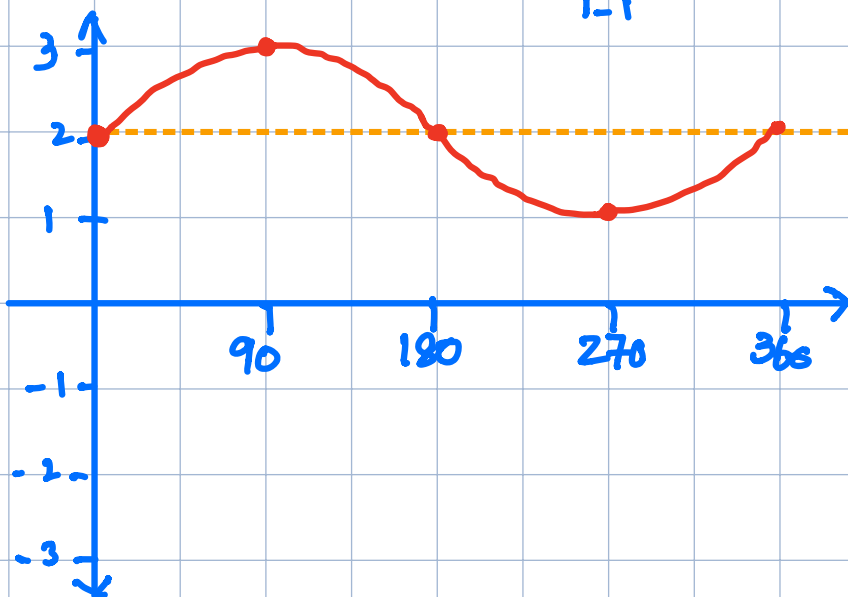
$$y = 3 \cos x \quad (+0) \rightarrow \text{Base.}$$



BASE LINE

$$y = \sin x \quad (+2) \rightarrow \text{Base line}$$

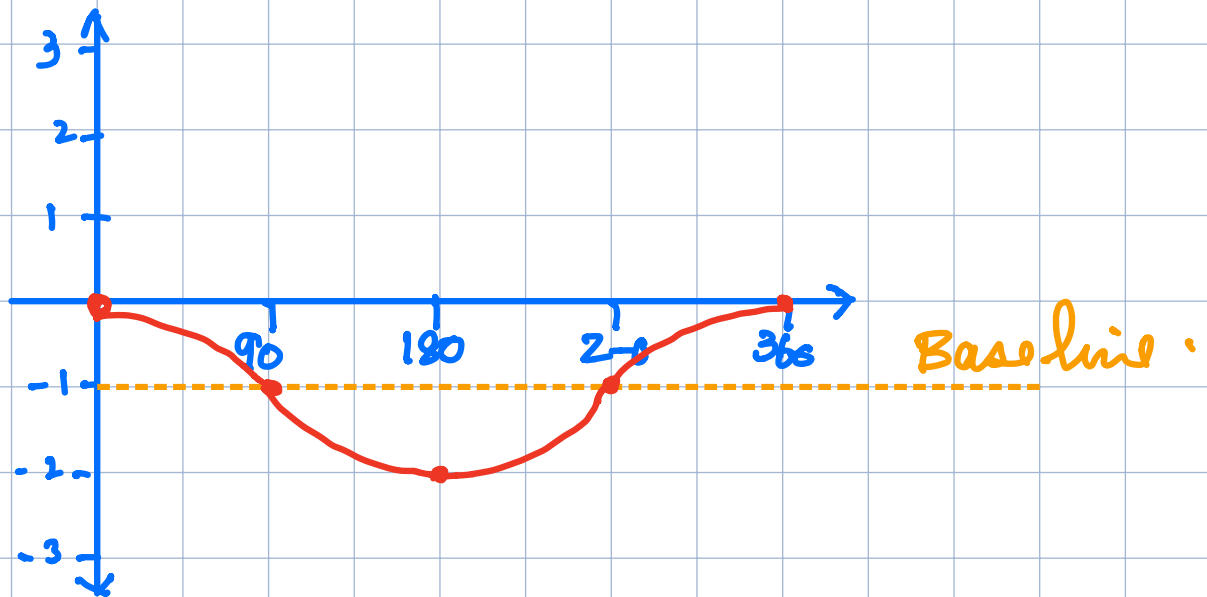
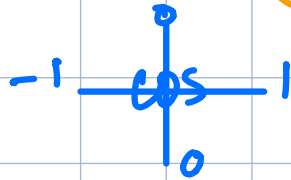
$\begin{matrix} 0 \\ \sin 0 \\ -1 \end{matrix}$



Base line.

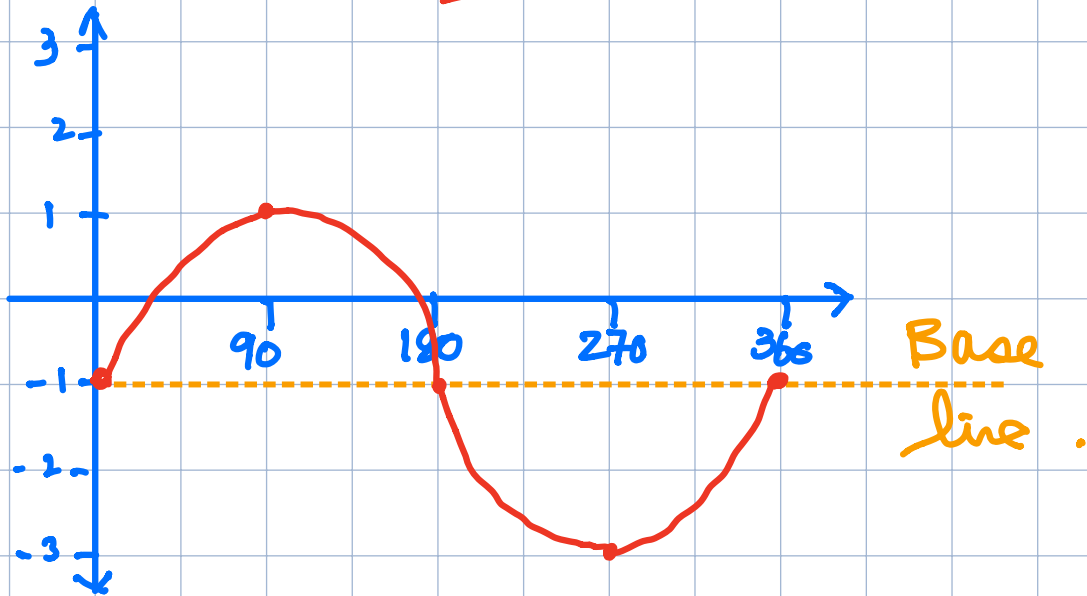
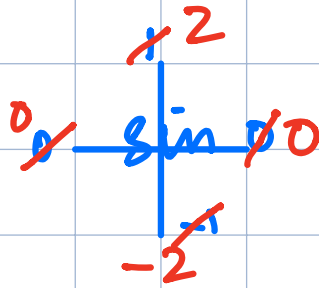
NOTE: GRID NEVER TELLS Y-AXIS VALUES
GRID ALWAYS TELLS DISTANCE
FROM BASELINE.

$$y = \cos x - 1 \rightarrow \text{Baseline.}$$



BASE LINE + AMPLITUDE

$$y = 2 \sin x - 1 \quad \text{Base line}$$



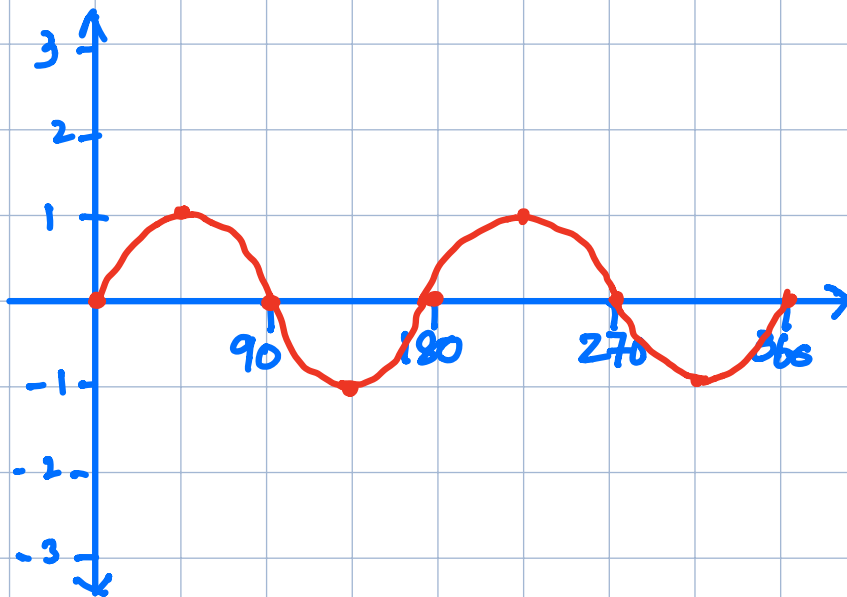
FREQUENCY :-

NO. OF COMPLETE CYCLES IN 360° .

$$y = \sin 2x$$

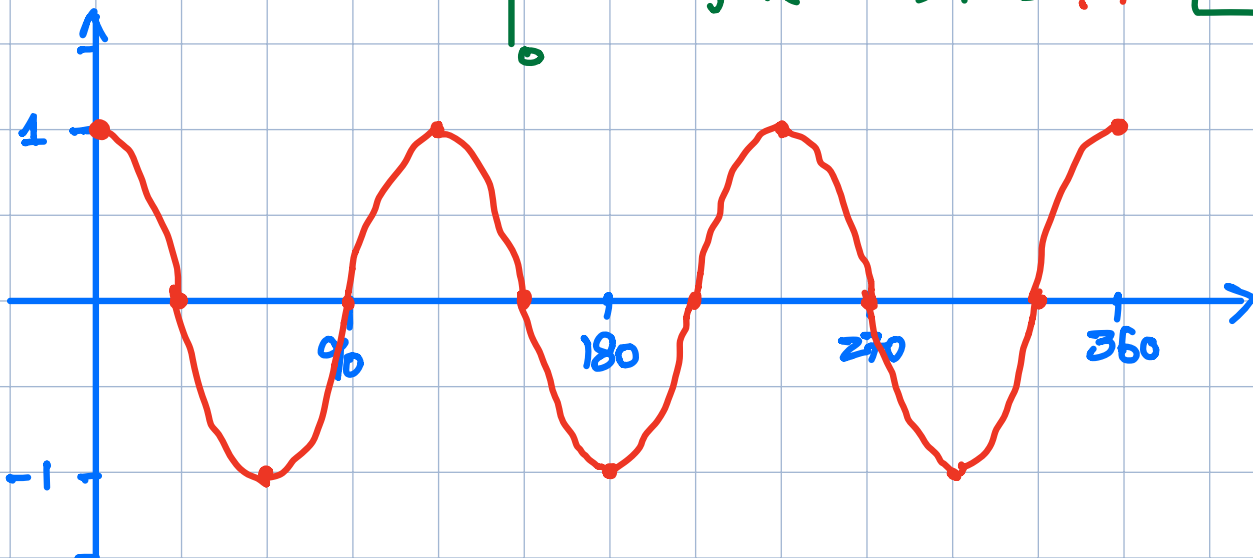
↓
2 cycles $\rightarrow 360^\circ$
1 cycle $\rightarrow 180 \div 2 = \boxed{90}$

↓
Diff after
which you
plot each
grid value



$$y = \cos 3x$$

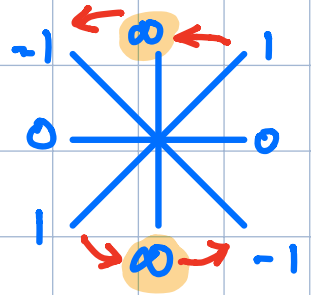
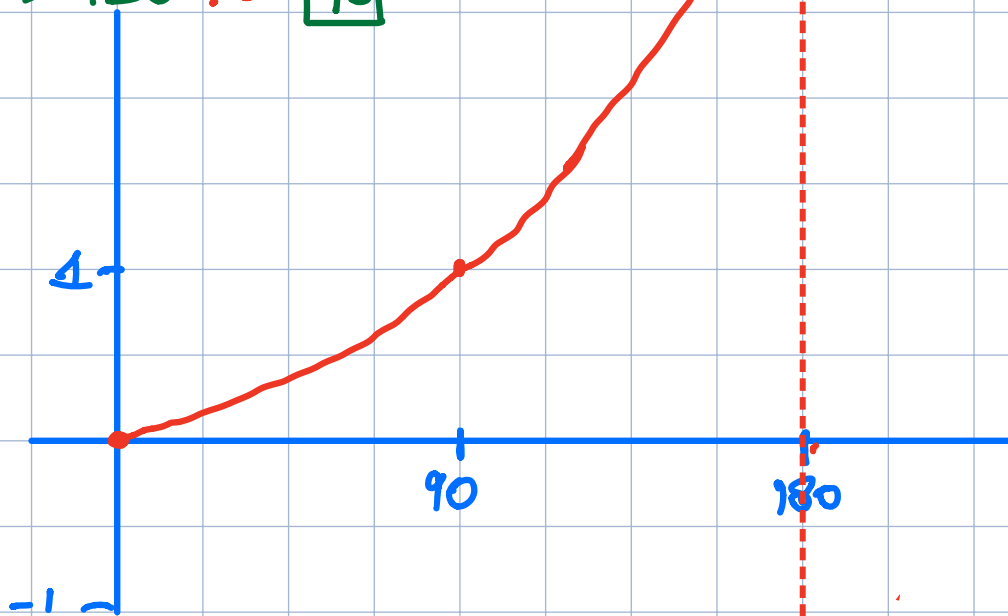
↓
3 cycle $\rightarrow 360^\circ$
1 cycle $\rightarrow 120 \div 3 = \boxed{30^\circ}$



$$y = \tan\left(\frac{1}{2}x\right) \quad 0 < x < 180$$

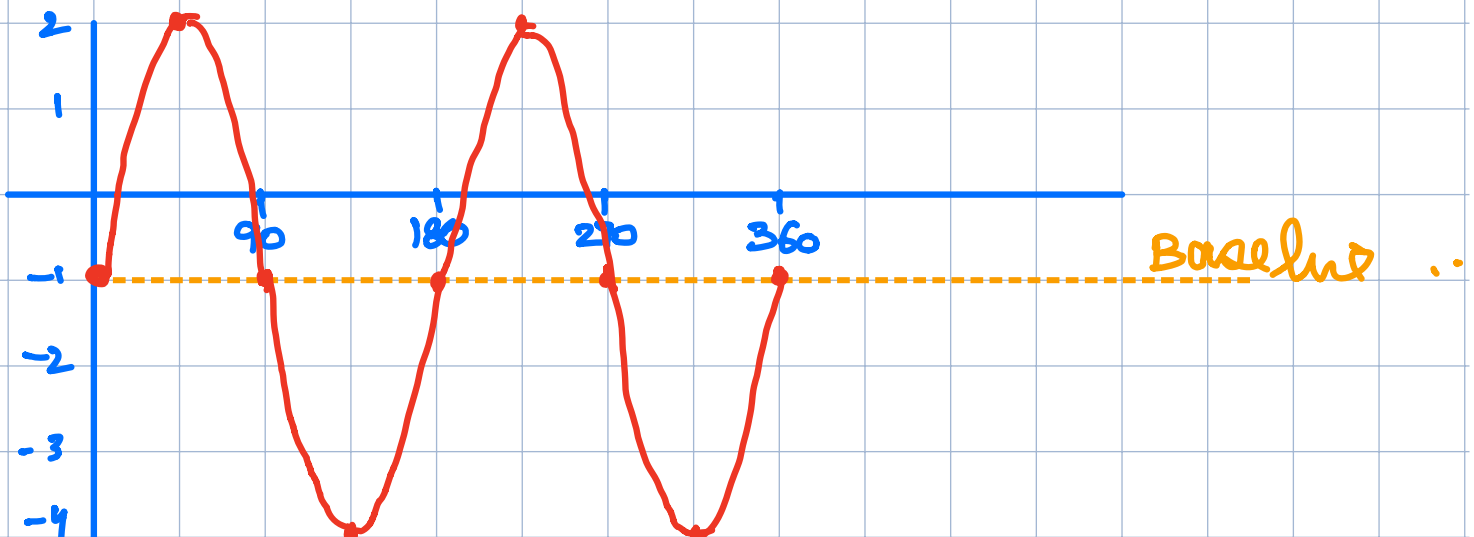
$\frac{1}{2}$ cycle $\rightarrow 360$

1 cycle $\rightarrow 720 \div 8 = \boxed{90}$



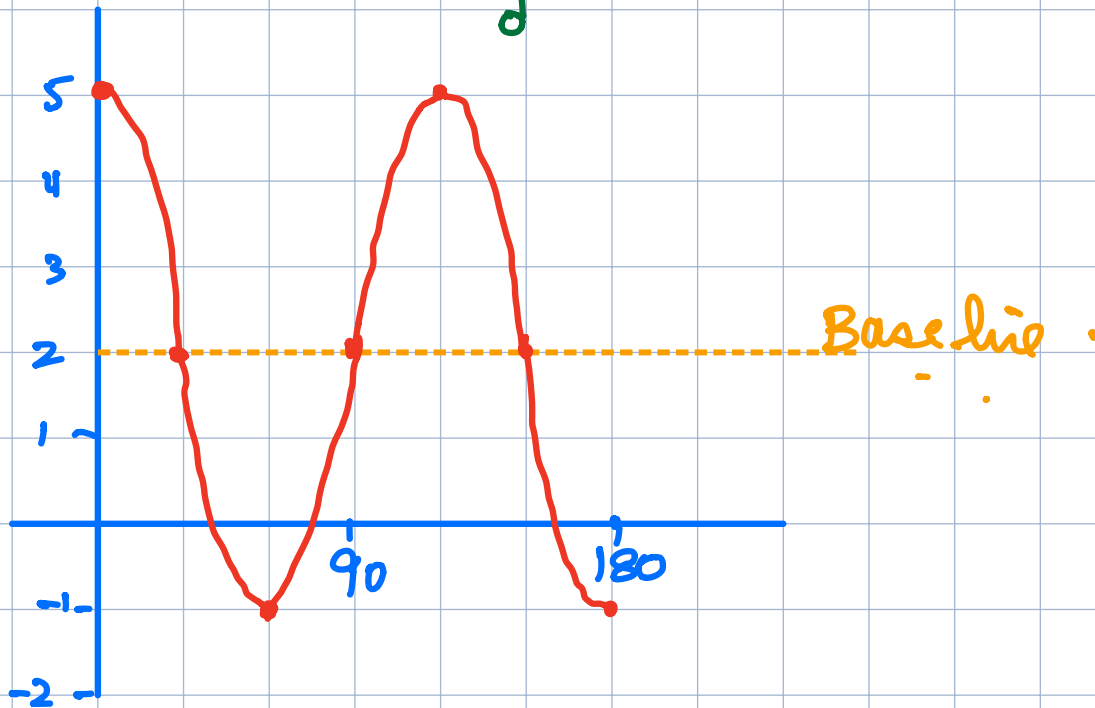
$$y = 3 \sin 2x - 1 \quad \text{--- Base line}$$

$\hookrightarrow 2 \text{ cycle} \rightarrow 360$
 1 cycle $\rightarrow 180 \div 4 = \boxed{45}$



$$y = 3 \cos 3x + 2 \quad 0 < x < 180$$

\downarrow 3 cycles $\rightarrow 360$
 1 cycle $\rightarrow 120 \div 4 = \boxed{30}$



DONE!

$$1 + 2 + 3 + 4 + 5 + 6 + \dots = -\frac{1}{12}$$