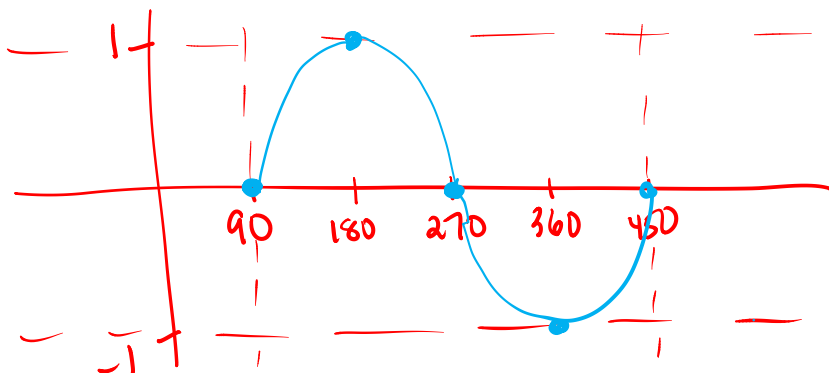


Algebra 2 – Day 2 – Degrees Horizontal Transformations
14.1 and 14.2 Graphing trigonometric functions

Name: Key

1. Graph ~~two~~ ^{one} periods of: $y = \sin(\Theta - 90^\circ)$ MHMLM → right 90



Amplitude: 1

Sinusoidal axis: 0

Period: $0 \rightarrow 360$

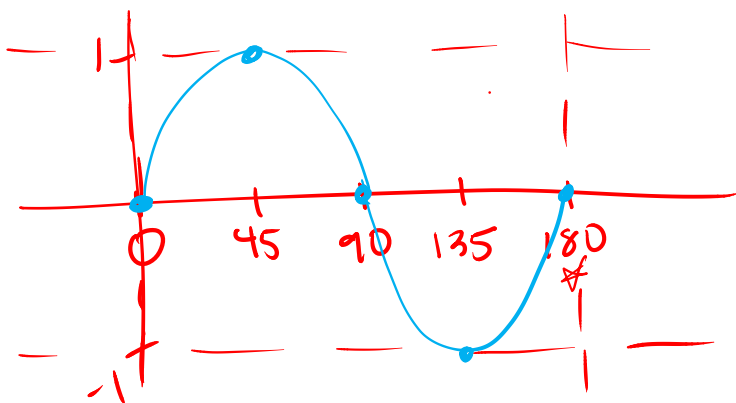
(right/left) Phase shift: +90

New Interval:

90 → 450

$\frac{360}{4} = \text{every } 90 \text{ critical value}$

2. Graph two periods of: $y = \sin(2\Theta)$ → shrink by 1/2
MHMLM



Amplitude: 1

Sinusoidal axis: 0

Period: $(0 \rightarrow 360) \cdot \frac{1}{2}$

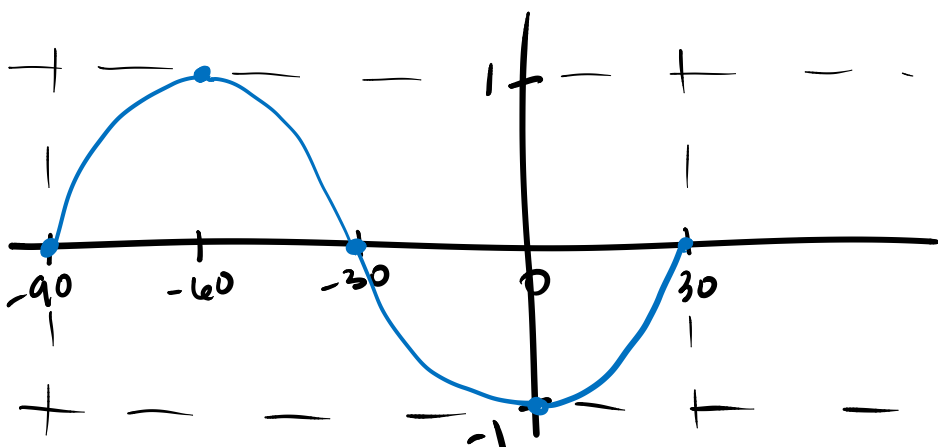
Phase shift: 0

New Interval:

0 → 180

$\frac{180}{4} = \text{every } 45 \text{ critical value}$

3. Graph two periods of: $y = \sin(3(\Theta + 90^\circ))$



Amplitude: 1

Sinusoidal axis: 0

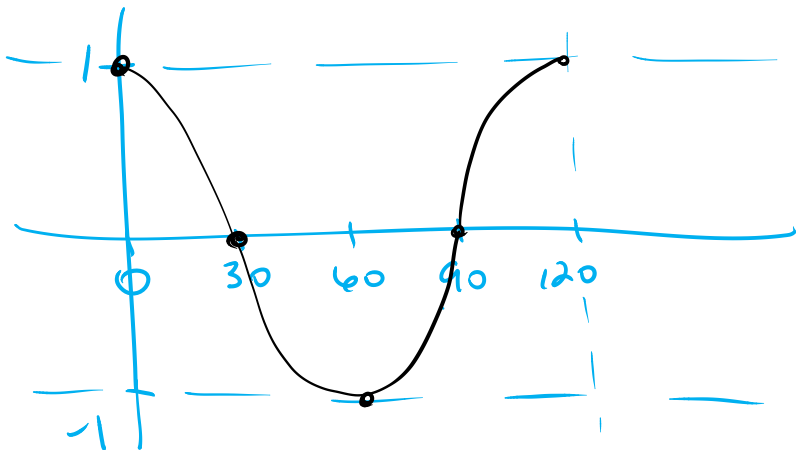
Period: $(0 \rightarrow 360) \cdot \frac{1}{3}$

$0 \rightarrow 120$

Phase shift: -90 -90

New Interval: -90 → 30

4. Graph two periods of: $y = \cos(3\theta)$ *shrink by $\frac{1}{3}$*



Amplitude: 1

Sinusoidal axis: 0

Period: $(0 \rightarrow 360) \cdot \frac{1}{3}$

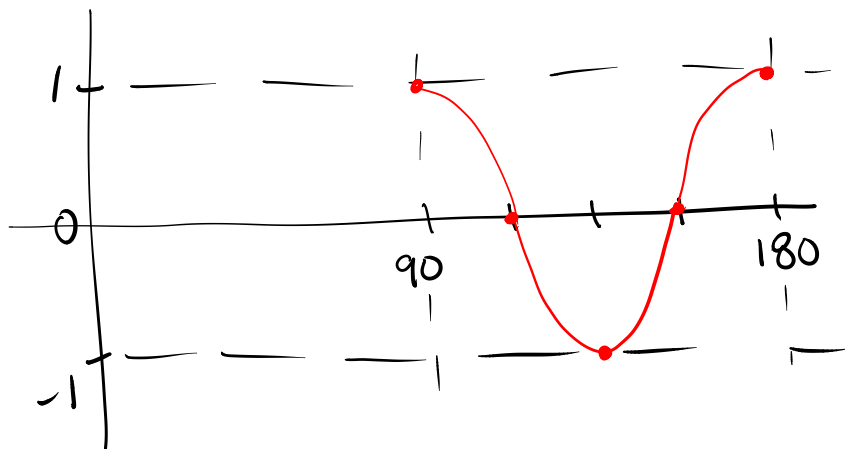
Phase shift: 0

New Interval:

0 → 120

$\frac{120}{4} = 30$ *critical value*

5. Graph two periods of: $y = \cos(4(\theta - 90^\circ))$



Amplitude: 1

Sinusoidal axis: 0

Period: $(0 \rightarrow 360) \cdot \frac{1}{4}$

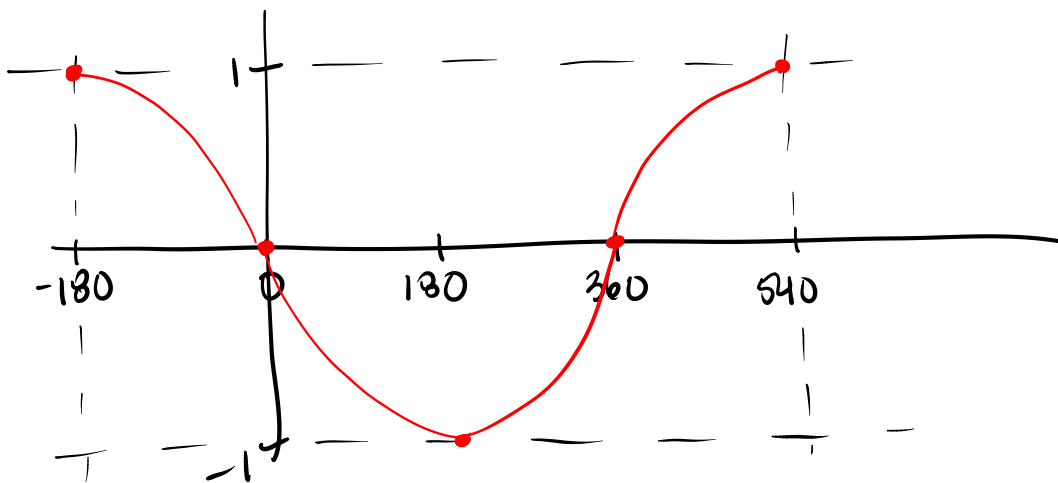
0 → 90

Phase shift: -90 +90

New Interval:

90 → 180°

6. Graph one period of: $y = \cos(\frac{1}{2}(\theta + 180^\circ))$



Amplitude: 1

Sinusoidal axis: 0

Period: $(0 \rightarrow 360) \cdot 2$

0 → 720

Phase shift: -180 -180

New Interval:

-180 → 540