

Warm-up/Review: Find the amplitude of each function.

1) $y = 7\sin \theta$

Amp = 7

2) $y = \frac{1}{8} \cdot \tan \theta$

No Amplitude
(no max/min)

Warm-up/Review: Using degrees and radians, find the period of each function.

3) $y = \cos \frac{\theta}{2} \Rightarrow y = \cos(\frac{1}{2}\theta)$

$\frac{360^\circ}{1/2} = \boxed{720^\circ}$ $\frac{2\pi}{1/2} = \boxed{4\pi}$

4) $y = \tan 5\theta$

$\frac{180^\circ}{5} = \boxed{36^\circ}$ $\frac{\pi}{5}$

Warm-up/Review: Using degrees and radians, find the amplitude and period of each function.

5) $y = 9\cos 2\theta$

Amp = 9

Period: $\frac{360^\circ}{2} = \boxed{180^\circ}$ $\frac{2\pi}{2} = \boxed{\pi}$

6) $y = 9\sin \frac{\theta}{3} \Rightarrow y = 9\sin(\frac{1}{3}\theta)$

Amp = 9

Period: $\frac{360^\circ}{1/3} = \boxed{1080^\circ}$ $\frac{2\pi}{1/3} = \boxed{6\pi}$

Using degrees, find the amplitude and period of each function. Then graph.

7) $y = \frac{1}{2} \cdot \sin \theta$

Amp = $\frac{1}{2}$

Period = $\frac{360^\circ}{1} = 360^\circ$

8) $y = 2\cos \theta$

Amp = 2

Period = $\frac{360^\circ}{1} = 360^\circ$

9) $y = 3\tan \theta$

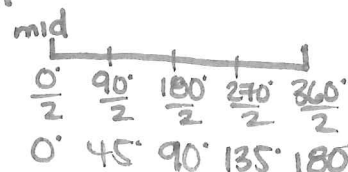
No Amplitude

Period: $\frac{180^\circ}{1} = 180^\circ$

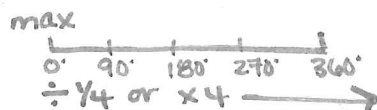
10) $y = \frac{1}{2} \sin 2\theta$

Amp = $\frac{1}{2}$

Period = $\frac{360^\circ}{2} = \underline{180^\circ}$



11) $y = \cos \frac{\theta}{4}$



Amp = 1

Period = $\frac{360^\circ}{1/4} = 1440^\circ$

12) $y = \tan 2\theta$

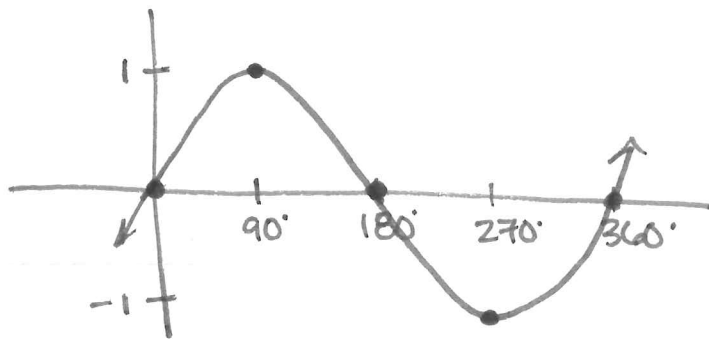
13) $y = \frac{1}{2} \cdot \sin 4\theta$

14) $y = 3\cos 4\theta$

$$y = \sin \theta$$

5 Key Pts

1. midline 0°
2. max 90°
3. midline 180°
4. min 270°
5. midline 360°

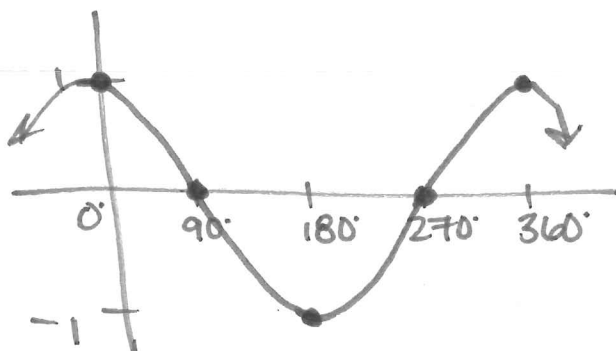


Amp = 1 period = 360°

$$y = \cos \theta$$

5 Key Pts

1. max 0°
2. midline 90°
3. min 180°
4. midline 270°
5. max 360°

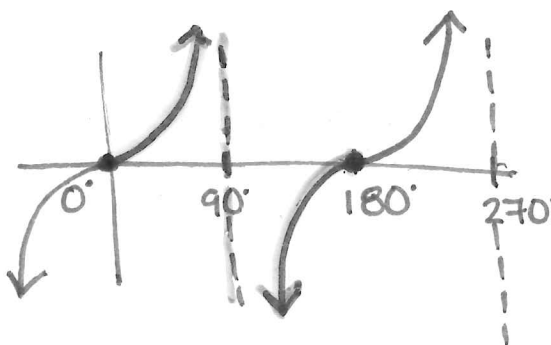


Amp = 1 Period = 360°

$$y = \tan \theta$$

3 Key pts

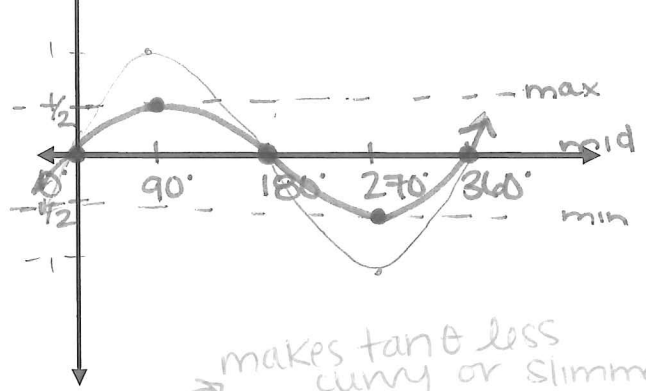
1. midline (increasing) 0°
2. asymptote 90°
3. midline (decreasing) 180°



Amp = None Period = 180°

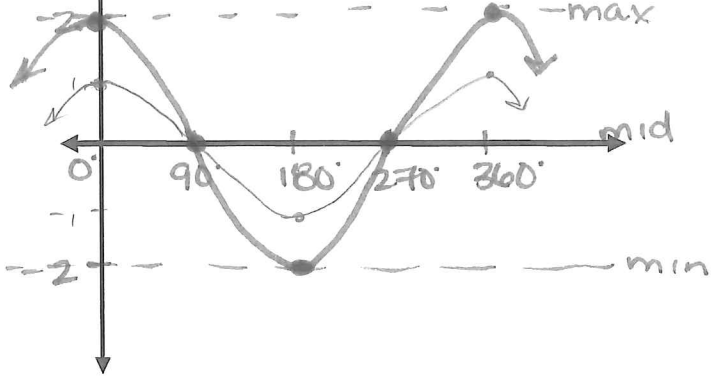
Notes - Graphing Trig Functions (Day 1 - Amp/Period)

⑦ $y = \frac{1}{2} \sin \theta$ Amp = $\frac{1}{2}$
 Period = 360°

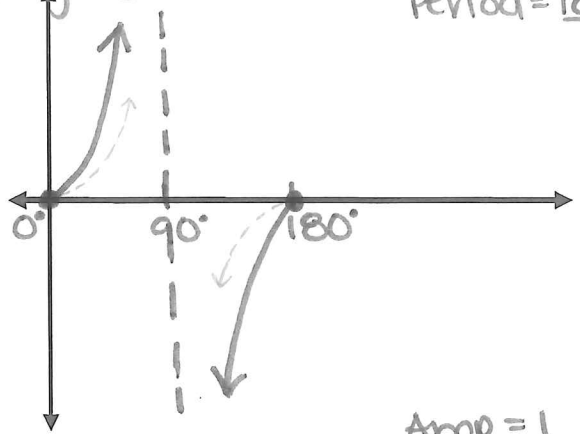


makes tan theta less curvy or slimmer

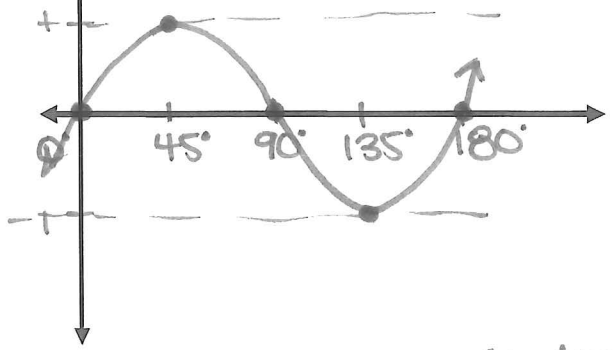
⑧ $y = 2 \cos \theta$ Amp = 2
 Period = 360°



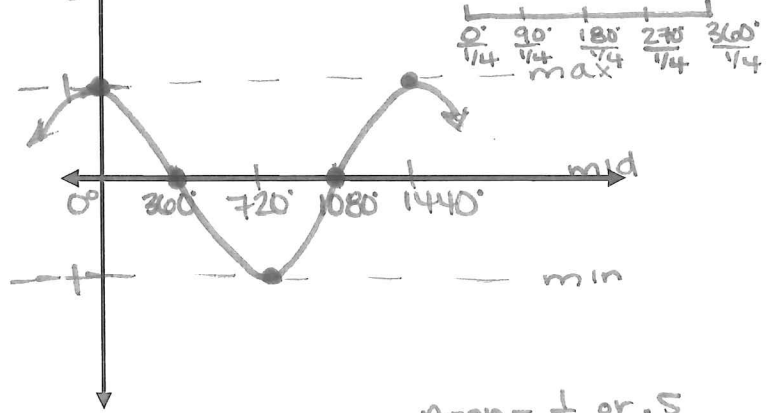
⑨ $y = 3 \tan \theta$ No Amp
 Period = $\frac{180^\circ}{1} = 180^\circ$



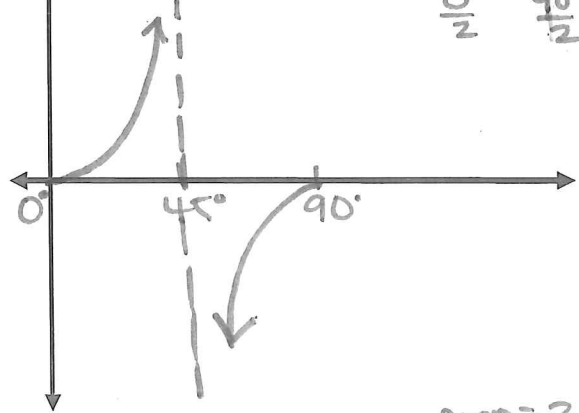
⑩ $y = 1 \sin 2\theta$ Amp = 1
 Period = $\frac{360^\circ}{2} = 180^\circ$



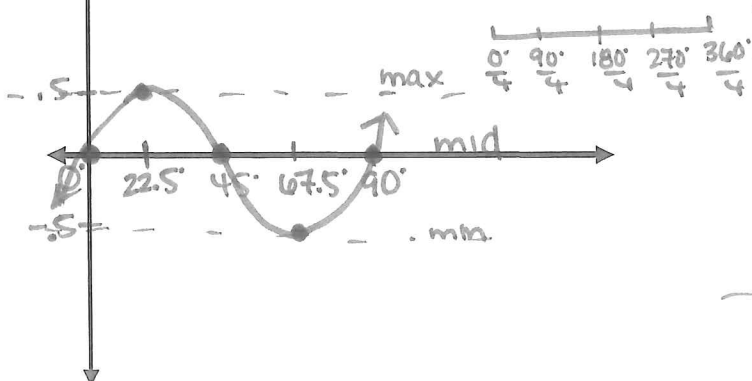
⑪ $y = \cos(\frac{1}{4}\theta)$ Amp = 1
 Period = $\frac{360^\circ}{1/4} = 1440^\circ$



⑫ $y = \tan 2\theta$ No Amp.



⑬ $y = \frac{1}{2} \sin 4\theta$ Amp = $\frac{1}{2}$ or .5
 Period = $\frac{360^\circ}{4} = 90^\circ$



⑭ $y = 3 \cos 4\theta$ Amp = 3
 Period = $\frac{360^\circ}{4} = 90^\circ$

