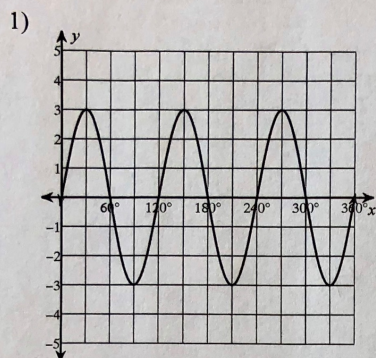


Writing Equations - Sin & Cos

For each graphed trig function, find its amplitude and period. Then write the equation.

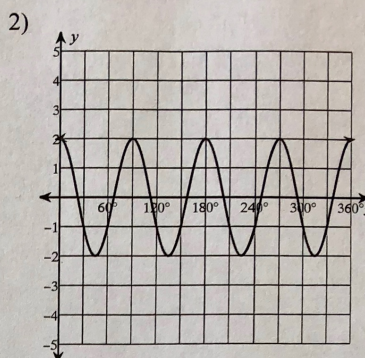


Amplitude: 3

Period: 120°

Equation: $y = 3 \sin 3\theta$

$\rightarrow \frac{360^\circ}{b} = 120^\circ \rightarrow b = 3$

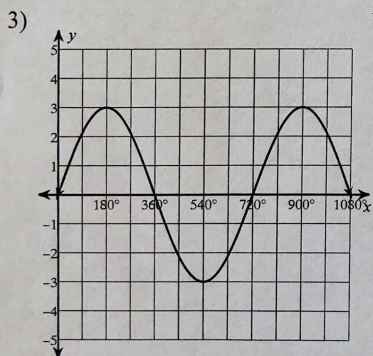


Amplitude: 2

Period: 90°

Equation: $y = 2 \cos 4\theta$

$\frac{360^\circ}{b} = 90^\circ \rightarrow b = 4$



Amplitude: 3

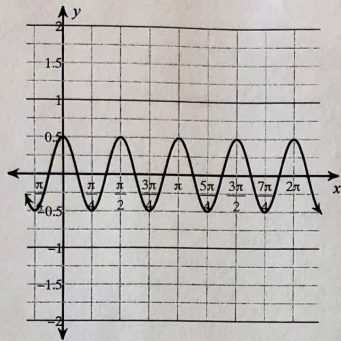
Period: 720°

Equation: $y = 3 \sin \frac{\theta}{2}$

$\frac{360^\circ}{b} = 720^\circ$

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

4)



Amplitude: $\frac{1}{2}$

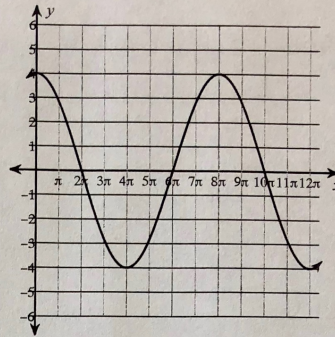
Period: $\frac{\pi}{2}$

Equation: $y = \frac{1}{2} \cos 4\theta$

$\rightarrow \frac{2\pi}{b} = \frac{\pi}{2}$

$b = \frac{2\pi}{\frac{\pi}{2}} = \frac{2\pi}{1} * \frac{2}{\pi} = 4$

5)



Amplitude: 4

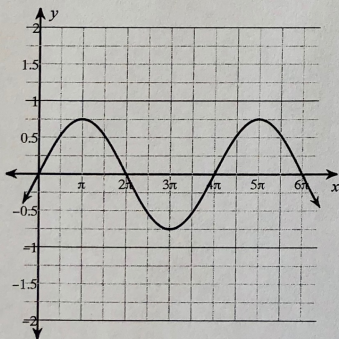
Period: 8π

Equation: $y = 4 \cos \frac{\theta}{4}$

$\rightarrow \frac{2\pi}{b} = 8\pi$

$b = \frac{2\pi}{8\pi} = \frac{1}{4}$

6)



Amplitude: $\frac{3}{4}$

Period: 4π

Equation: $y = \frac{3}{4} \sin \frac{\theta}{2}$

$\rightarrow \frac{2\pi}{b} = 4\pi$

$\frac{2\pi}{4\pi} = b$
 $\frac{1}{2} = b$