

Sine and Cosine Graph Transformations

Fill in the tables.

	Period	Amplitude	Phase shift	Vertical Shift	Range
$y = -2\sin(\frac{1}{5}x - \pi)$					
$y = \frac{1}{3}\cos(\theta + \frac{\pi}{3}) + 3$					
$y = \cos(3x - \frac{5\pi}{6}) - \frac{1}{2}$					
$y = 5\cos(\frac{1}{2}x) + 4$					
$y = -4\sin(2\theta)$					
$y = \frac{1}{2}\cos(\theta + \frac{\pi}{2}) + 3$					
$y = -5\sin(\frac{1}{3}x) - \frac{1}{2}$					
$y = \cos(\frac{3}{2}x) + \frac{5}{3}$					

Write the sine equation for each of the following:

Amplitude	Period	Phase shift	Vertical Shift	Equation
2	$\frac{\pi}{2}$	$-\frac{\pi}{4}$	1	
4	3π	$\frac{\pi}{2}$	-4	
1	1	$\frac{\pi}{4}$	2	
3	4	-1	$\frac{1}{2}$	

Graph on a separate sheet of paper:

1. $y = 2\sin(4\theta - \frac{3\pi}{2}) + 1$	5. $y = 2\cos(\frac{1}{3}\pi\theta + 2\pi)$
2. $y = -\cos(\frac{\theta}{2} + \frac{5\pi}{3}) - 1$	6. $y = -2 + \sin(4\theta - \frac{2\pi}{3})$
3. $y = -3\sin(3\theta - 6) + 2$	7. $y = -4\sin(3\theta)$
4. $y = -1 + 4\cos(4\theta - \pi)$	8. $y = 2\cos(\frac{\theta}{4} + \frac{\pi}{6})$