DIRECTIONS: Write an equation that matches the given description.

13) A cosine function with amplitude of 3 and period of $4\pi$.

$a=3 \quad P=4\pi \quad b=\frac{2\pi}{4\pi}=\frac{1}{2}$

$y=3\cos\frac{1}{2}\theta$ or $y=3\cos\frac{\theta}{2}$

14) A sine function with amplitude of 4 and period of 3, with a vertical reflection.

$a=-4 \quad b=2\pi/3$

$y=-4\sin\frac{2\pi\theta}{3}$

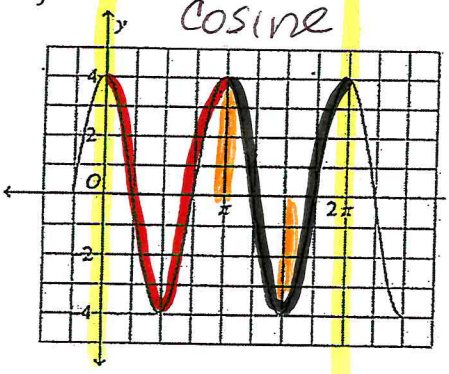
15) A sine function with amplitude of 10 and period of $\pi$.

$a=10 \quad b=\frac{2\pi}{\pi}=2$

$y=10\sin 2\theta$

DIRECTIONS: Write an equation that satisfies the given periodic graph.

16)

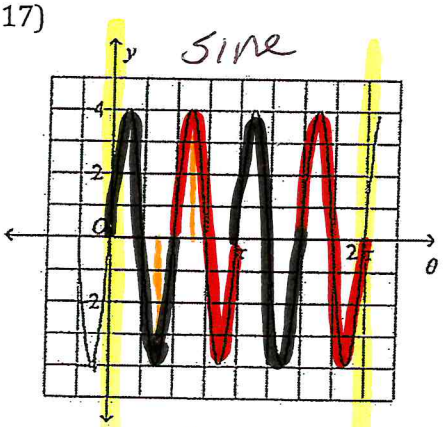



$b=2$

amp = 4
no reflection,
so $a=4$

$y=4\cos 2\theta$

17)

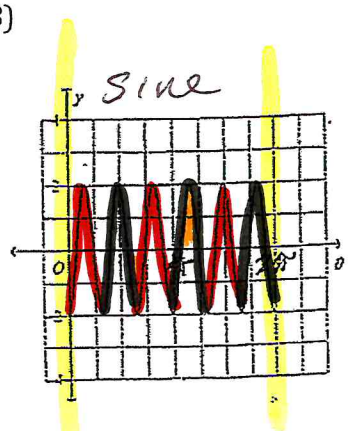



$b=4$

amp = 4
no reflection,
so $a=4$

$y=4\sin 4\theta$

18)




$b=6$

amp = 2 w/ a
reflection,
so $a=-2$

$y=-2\sin 6\theta$