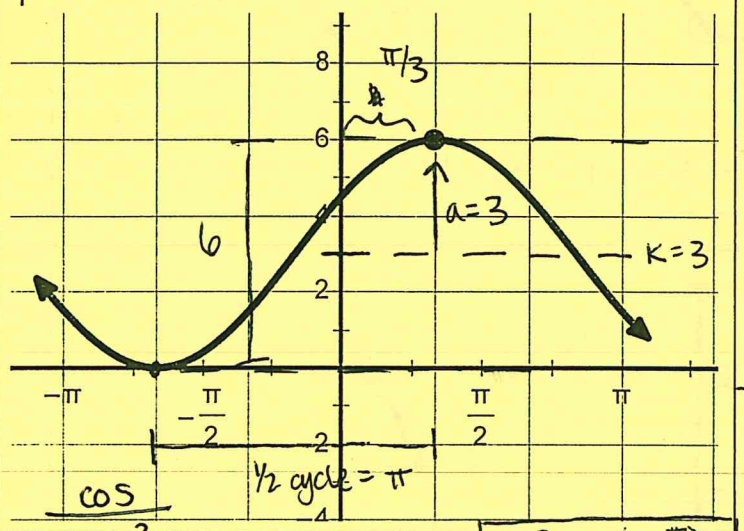
Pre-Calculus

Name:

Graph to Equation Practice

Find the equation of the function whose graph is given. Base your graph on the indicated point (i.e., use it as your "starting" point). If no point is included, base the graph on any point you choose.

1



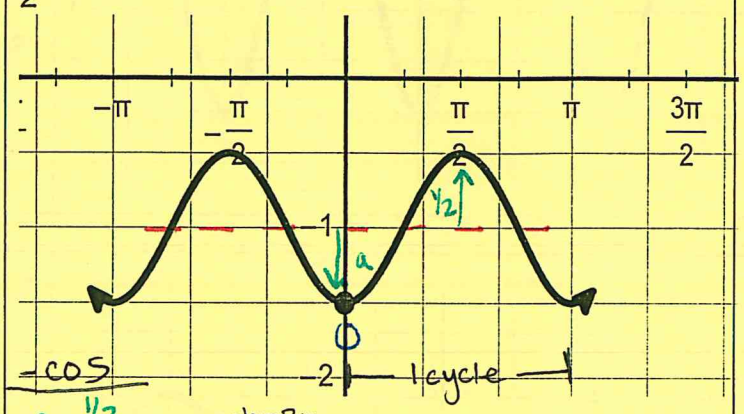
cos

a = 3
b = 1
h = right π/3
K = 3
period = 2π

p·b = 2π
2π·b = 2π
b = 1

$y = 3\cos\left(x - \frac{\pi}{3}\right) + 3$

2



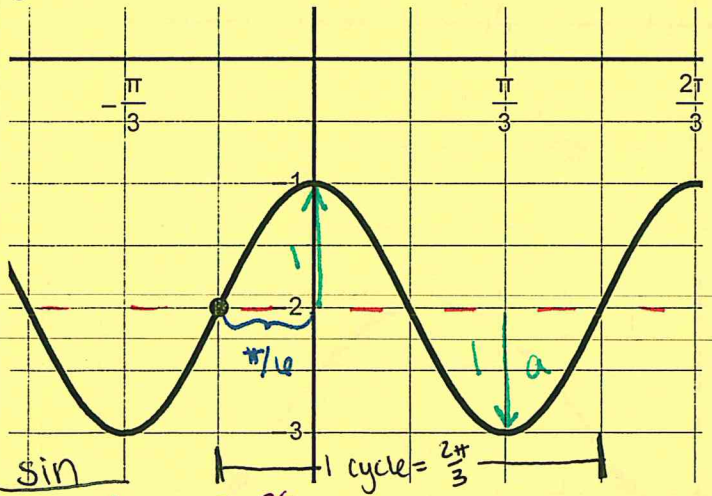
−cos

a = ½
b = 2
h = 0
K = −1
period = π

p·b = 2π
π·b = 2π
b = 2

$y = -\frac{1}{2}\cos 2(x) - 1$

3



sin

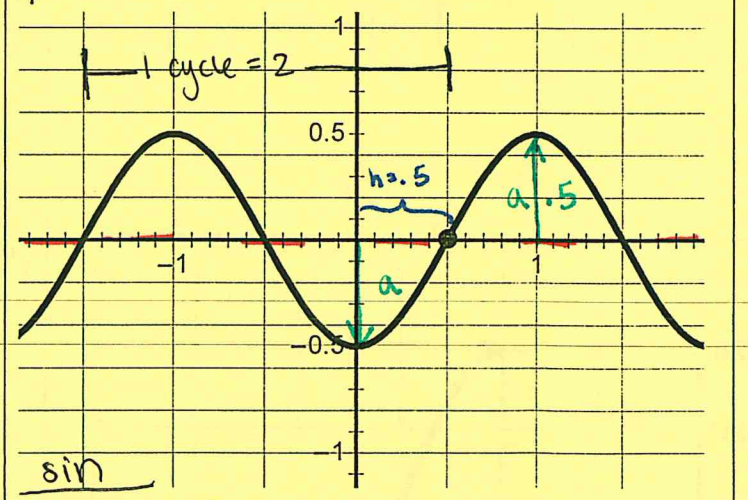
a = 1
b = 3
h = left π/6
K = −2
period = $\frac{2\pi}{3}$

$\frac{3}{2\pi} \cdot \frac{2\pi}{3} \cdot b = 2\pi \cdot \frac{3}{2\pi}$

b = 3

$y = \sin 3\left(x + \frac{\pi}{6}\right) - 2$

4



sin

a = .5
b = π
h = R·.5
K = 0
period = 2

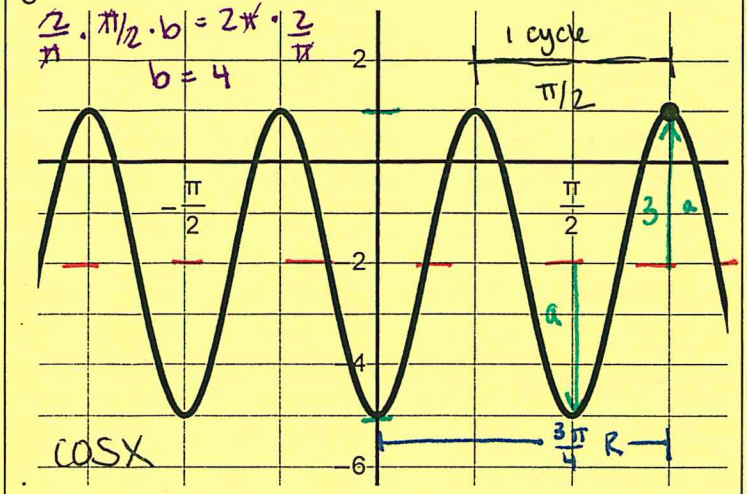
2·b = 2π
b = π

$y = .5\sin\pi(x - .5)$

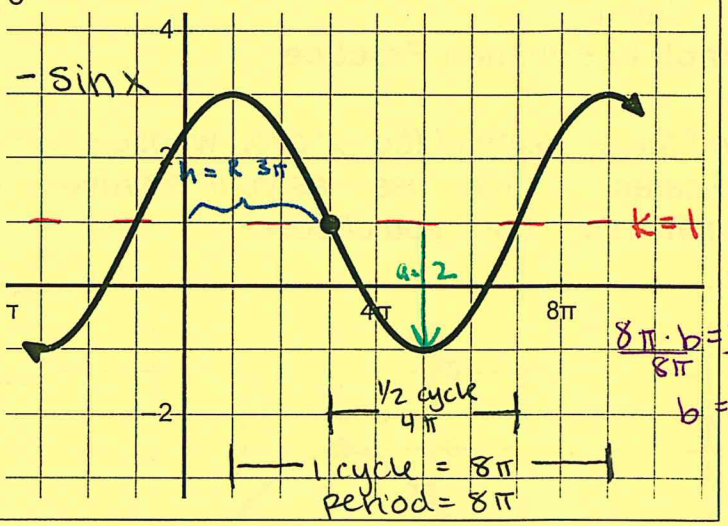
$y = 3\cos 4\left(x - \frac{3\pi}{4}\right) - 2$

$y = -2\sin \frac{1}{4}(x - 3\pi) + 1$

5



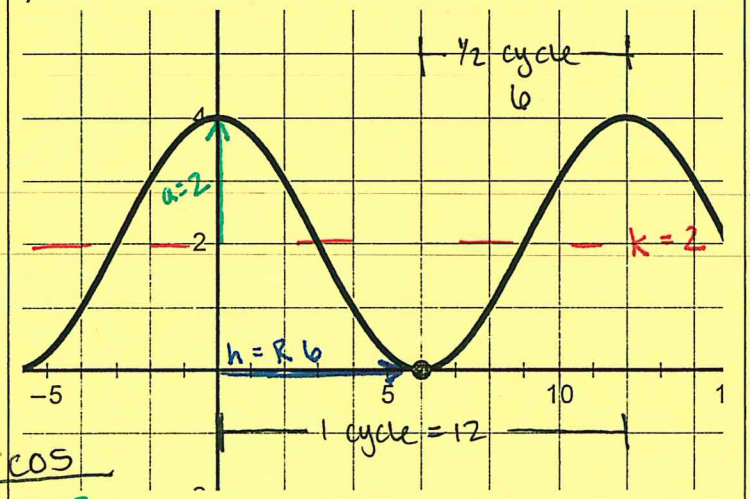
6



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

$b = 1/4$

7



a = 2

b = $\pi/6$

h = R 6

K = 2

period = 12

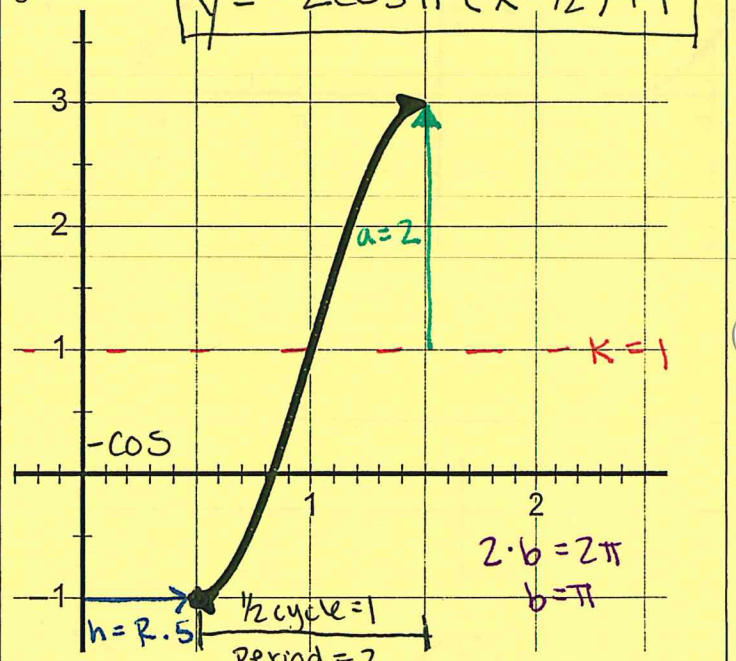
$12b = 2\pi$

$b = \pi/6$

$y = -2\cos \pi/6 (x - 6) + 2$

8

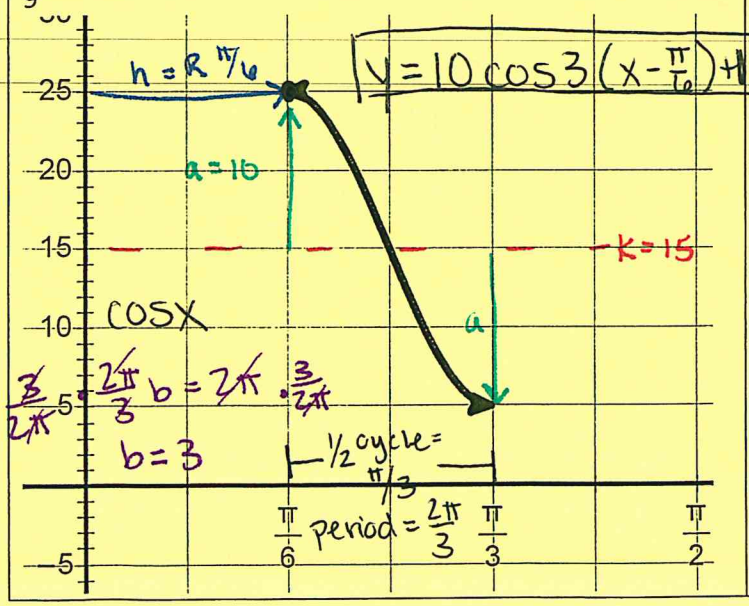
$y = -2\cos\pi(x - 1/2) + 1$



$2 \cdot b = 2\pi$

$b = \pi$

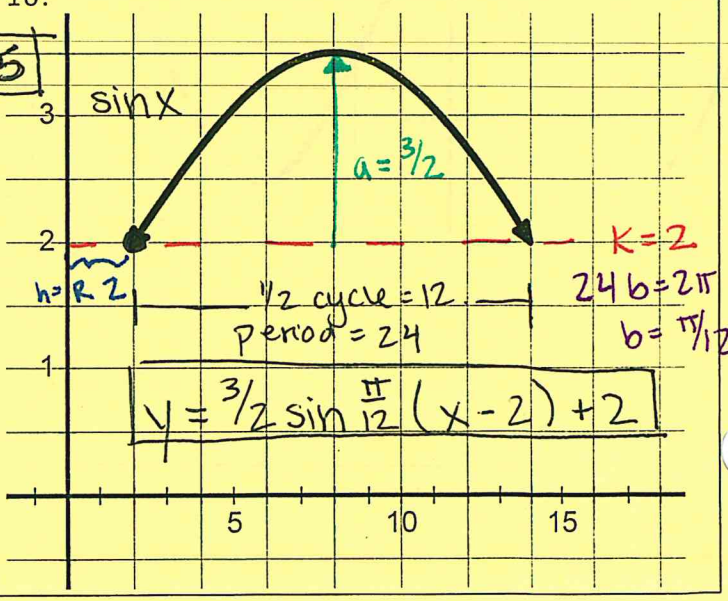
9



$\frac{3}{2\pi}$ $\frac{2\pi}{3} b = 2\pi \cdot \frac{3}{2\pi}$

$b = 3$

10.



$24b = 2\pi$

$b = \pi/12$

$y = 3/2 \sin \frac{\pi}{12}(x - 2) + 2$