Name _____ Date _____

Practice 7.6: Graphs of Sin & Cos

1. Find the period and amplitude of each function.

a. $y = 2\sin(2x)$ **b.** $y = 3\cos(3x)$ **c.** $y = \frac{3}{2}\cos\left(\frac{x}{2}\right)$ **d.** $y = -2\sin\left(\frac{x}{3}\right)$

e. $y = \frac{1}{2}\sin(\pi x)$ **f.** $y = -\frac{5}{2}\cos\left(\frac{\pi x}{2}\right)$ **g.** $y = -3\cos(10x)$ **h.** $y = 3\sin(4\pi x)$

2. Describe the change between the graphs of f and g .

a. $f(x) = \sin x$
$g(x) = \sin(x - \pi)$

b. $f(x) = \cos x$
$g(x) = \cos(x + \pi)$

c. $f(x) = \cos 2x$
$g(x) = -\cos 2x$

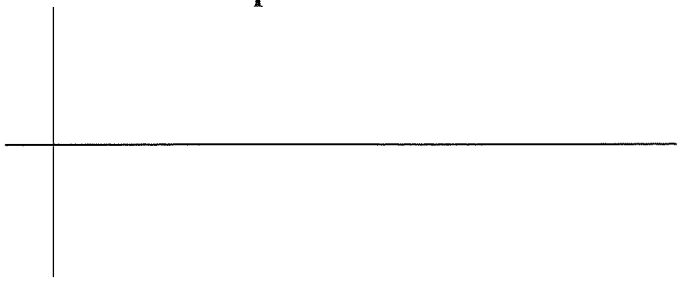
d. $f(x) = \sin 3x$
$g(x) = \sin(-3x)$

d. $f(x) = \sin x$
$g(x) = 2 + \sin x$

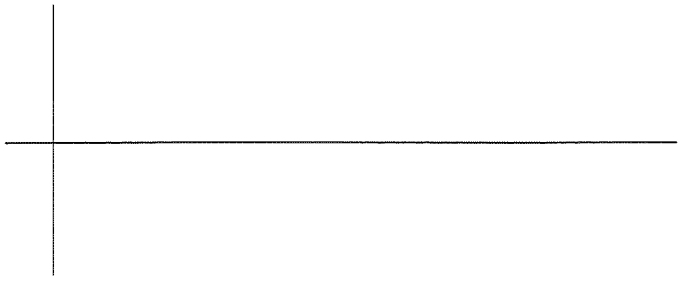
e. $f(x) = \cos 4x$
$g(x) = \cos(4x) - 2$

3. <u>Sketch</u> the graphs of f and g on the same coordinate plane. Include 2 full periods

a. $f(x) = -2\sin x$
$g(x) = 4\sin x$

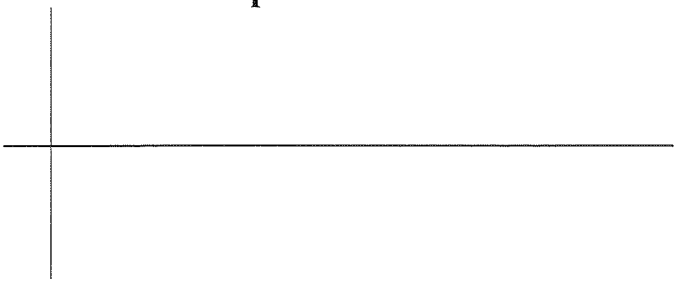


b. $f(x) = \cos x$
$g(x) = 1 + \cos x$

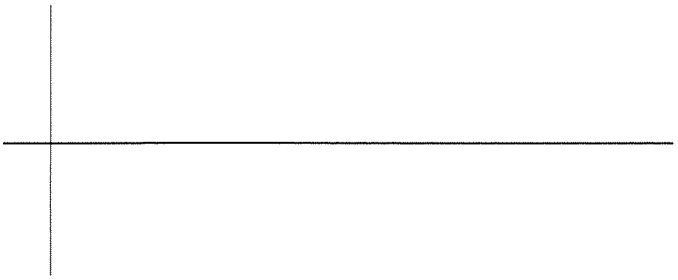


3. Sketch the graphs of f and g on the same coordinate plane. Include 2 full periods

c. $f(x) = \sin x$
$g(x) = \sin {}^{x}/_{3}$



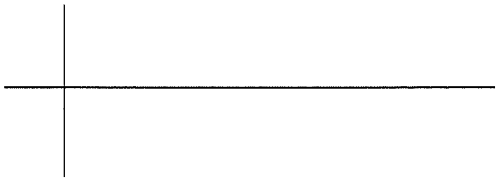
d. $f(x) = \sin x$
$g(x) = \cos (x - {}^{\pi}/_{2})$



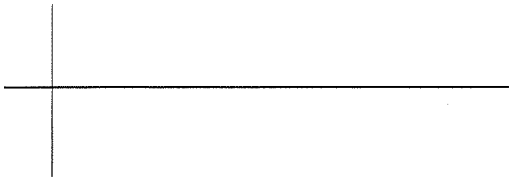
4. Sketch the graphs. Include 2 periods.

a. $y = -2\sin 6x$

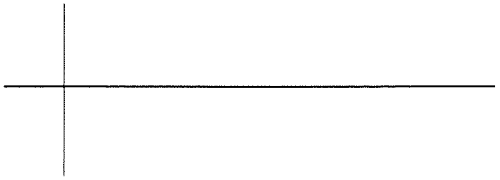
b. $y = -3\cos 4x$



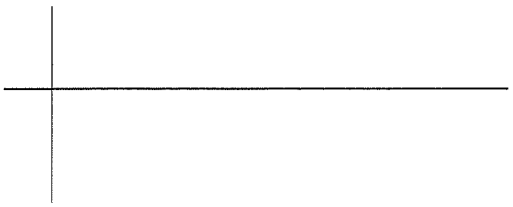
c. $y = \cos 2\pi x$



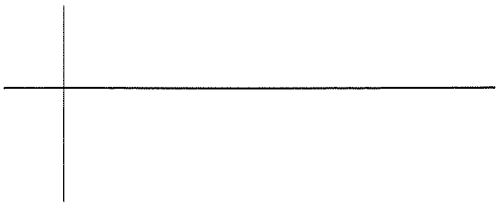
d. $y = {}^{3}/_{2}\sin\left(\frac{\pi x}{4}\right)$



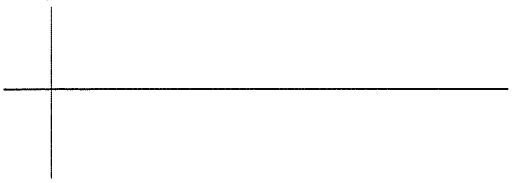
e. $y = 2 - \sin\left(\frac{2\pi x}{3}\right)$



f. $y = 2\cos x - 1$



g. $y = 4\cos\left(\frac{\pi x}{12}\right)$



h. $y = {}^{1}/_{2}\sin 4\pi x$