Name_____ Date_____ Period_____

Xtra Practice 5.4 (Easy Phase Shifts)—Sinusoids

No Calculator

Answer the following on a separate piece of paper

For each of the following 1-3:

(a) Put the function into standard transformation form.
(b) How many cycles will $f(x)$ have from 0 to 2π ?
(c) What is the period of $f(x)$?
(d) What is the range of $f(x)$?
(e) Sketch the at least two full cycles, with at least ONE negative critical value.
(f) Write an equivalent equation in terms of EACH of the other 3 trig functions. (Positive cosine, negative cosine, positive sine, or negative sine)

1. $f(x) = -2\cos\left(2x - \dfrac{\pi}{2}\right) - 2$

2. $g(x) = 5\sin\left(x + \dfrac{\pi}{2}\right) - 6$

3. $h(x) = 3 - 4\sin\left(\dfrac{3\pi}{2} + 4x\right)$