

Name: _____

SHOW ALL YOUR WORK FOR EACH PROBLEM TO GET FULL CREDIT.
PLEASE BE NEAT.

Direction: Read through sections 5.4 and 5.5 in your book and answer the following questions.

1. Find the exact values of (Section 5.3)
 - a. $\sin(90^\circ)$
 - b. $\sin(180^\circ)$
 - c. $\cos(90^\circ)$
 - d. $\cos(270^\circ)$
 - e. $\tan(180^\circ)$

2. Find the definition of an even and odd functions from your book or online and then give examples for each.

3. Find the definition of domain and range of functions from your book or online and then give an example.

4. Determine the amplitude, period, and phase shift of each function. (Section 5.5)
 - a) $y = 2\cos\left(2x - \frac{\pi}{2}\right)$
 - b) $y = -3\sin(\pi x + 2\pi)$

5. Given the function $f(x) = 3 \sin\left(\frac{\pi x}{2}\right)$, find the following values. (Section 5.5)

$$f(0) =$$

$$f(1/3) =$$

$$f(1) =$$

$$f(5/3) =$$

$$f(2) =$$

$$f(7/3) =$$

$$f(3) =$$

$$f(11/3) =$$

$$f(4) =$$

Plot each of the ordered pairs you found above in a rectangular coordinate system. Then connect the points with a smooth curve. Do you notice any patterns? What are the x- and y- intercepts of f ? What are the max and min values of $f(x)$?