

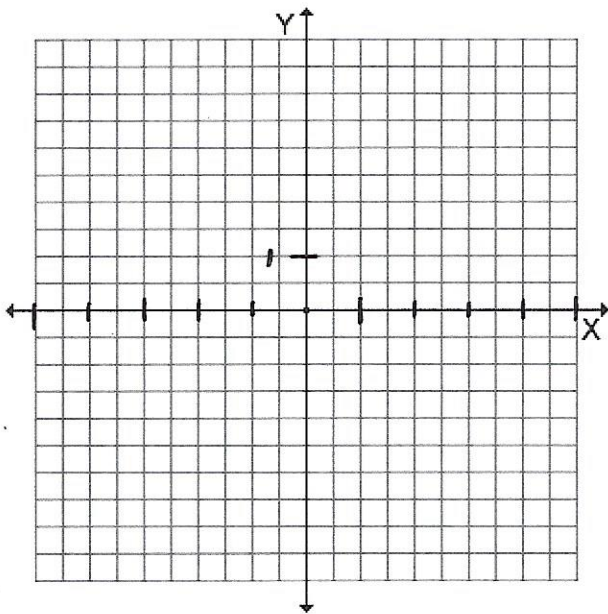
**Pre Calculus**  
**Practice Worksheet #1 Section: 4.5**

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Per: \_\_\_\_\_ Assignment # \_\_\_\_\_

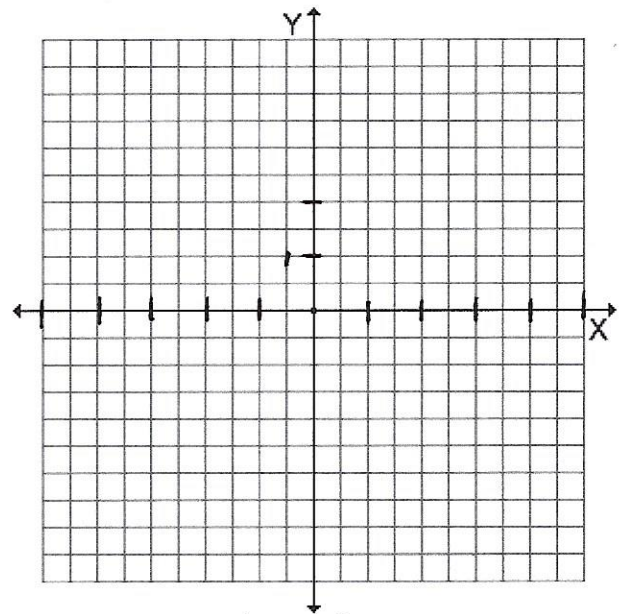
- Determine:**
- a) amplitude
  - b) value of "b"
  - c) period
  - d) phase shift
  - e) vertical translation
  - f) reflection? yes/no
  - g) graph the function.

Write these answers on the back.

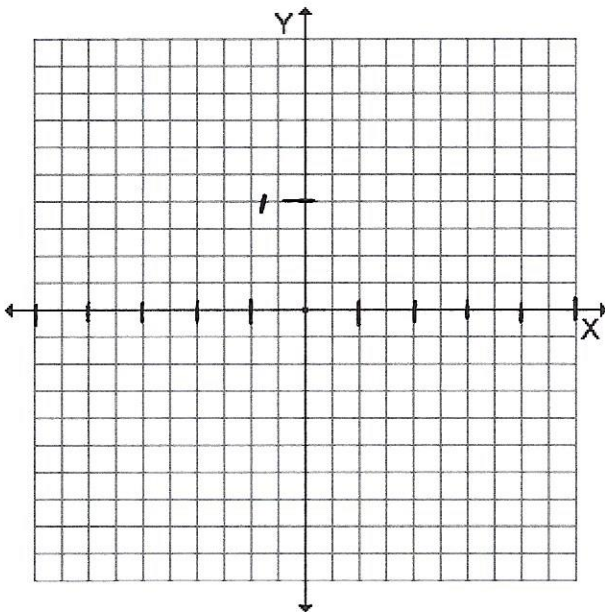
1)  $y = 3 \sin\left(2x + \frac{\pi}{2}\right) + 2$



2)  $y = -2 \cos(3x + \pi) - 2$



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



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

