

LESSON 11-9, STARTER ACTIVITY

Name in English

State the amplitude, period, phase shift, and vertical shift for each function.

$$y = 2 \tan 2\left(\theta + \frac{\pi}{4}\right) - 5$$

1. Amplitude

- a) 2
- b) -2
- c) -5
- d) $\frac{\pi}{4}$

2. Period

- a) π or 180°
- b) $\frac{\pi}{2}$ or 90°
- c) $\frac{\pi}{4}$ or 45°
- d) None of the above

3. Phase Shift

- a) $\frac{\pi}{4}$ units up
- b) $\frac{\pi}{4}$ units down
- c) $\frac{\pi}{4}$ units to the right
- d) $\frac{\pi}{4}$ units to the left

4. Vertical Shift

- a) 5 units up
- b) 5 units down
- c) 5 units to the left
- d) 5 units to the right

5. Identify domain of *sine* function.

- a) $(0, \infty)$
- b) $(-\infty, 0)$
- c) $(-\infty, \infty)$
- d) $\left(\frac{\pi}{2}, -\frac{\pi}{2}\right)$

6. Identify Range of *sine* function.

- a) $[-1, 1]$
- b) $(-\infty, 0)$
- c) $(-\infty, \infty)$
- d) $\left(\frac{\pi}{2}, -\frac{\pi}{2}\right)$

7. Identify domain of *cosine* function.

- a) $(0, \infty)$
- b) $(-\infty, 0)$
- c) $(-\infty, \infty)$
- d) $\left(\frac{\pi}{2}, -\frac{\pi}{2}\right)$

8. Identify Range of *cosine* function.

- a) $[-1, 1]$
- b) $(-\infty, 0)$
- c) $(-\infty, \infty)$
- d) $\left(\frac{\pi}{2}, -\frac{\pi}{2}\right)$