

**UNIT 6 WORKSHEET 17**  
**AMPLITUDE, PERIOD AND PHASE SHIFTS**

**Find the amplitude, period, phase shift and initial interval for each of the following trigonometric functions.**

**Standard Form:**

$$y = a \sin(bx + c) + d \quad y = a \cos(bx + c) + d \quad y = a \csc(bx + c) + d \quad y = a \sec(bx + c) + d$$

**Use the following formulas to find each of the following.**

**Amplitude:**  $|a|$

**Period:**  $\frac{2\pi}{|b|}$

**Phase Shift:**  $-\frac{c}{b}$

**Initial Interval:**  
 $0 \leq bx + c \leq 2\pi$

1)  $y = 2 \sin 4x$

**Amp:**

**Per:**

**P.S.:**

**I.I.:**

2)  $y = \frac{1}{2} \sin\left(x - \frac{\pi}{4}\right)$

**Amp:**

**Per:**

**P.S.:**

**I.I.:**

3)  $y = -4 \cos(2x - \pi)$

**Amp:**

**Per:**

**P.S.:**

**I.I.:**

4)  $y = -\frac{3}{5} \csc\left(4x + \frac{\pi}{3}\right)$

**Amp:**

**Per:**

**P.S.:**

**I.I.:**

5)  $y = 3 - \sin 4\pi x$

**Amp:**

**Per:**

**P.S.:**

**I.I.:**

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

**Amp:**

**Per:**

**P.S.:**

**I.I.:**

7)  $y = -3 \csc(\pi - 3x) + 6$

**Amp:**

**Per:**

**P.S.:**

**I.I.:**

8)  $y = \frac{1}{4} \sec\left(\frac{2x}{3} + 2\pi\right)$

**Amp:**

**Per:**

**P.S.:**

**I.I.:**