

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.

$$\text{Amplitude: } |a| \quad \text{Period: } \frac{2\pi}{|b|} \quad \text{Phase Shift: } -\frac{c}{b} \quad \text{Initial Interval: } 0 \leq bx + c \leq 2\pi$$

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.: