

4.4 Trig - Writing Equations

Name: _____

Write a sine or cosine equation with the given characteristics.

① $A = 4$

$$P = \pi/4$$

$$P.S. = \pi/6$$

$$V.S. = -3$$

② $A = 2$

$$P = 3\pi$$

$$P.S. = -\frac{2}{5}\pi$$

$$V.S. = 1$$

③ Max Value of 17 when $x = 5$

Min Value of 11 when $x = 20$

④ Min Value of 3 when $x = 2$

Max Value of 29 when $x = 8$

(5) Min Value of -4 when $x = 6$

Max Value of 26 when $x = 14.8$

(6) Max value of 74.6 when $x = \frac{5}{6}\pi$

Min value of 27.8 when $x = \frac{11}{3}\pi$

Sketch 1 period. Give Period, Amplitude, Phaseshift, Vertical Shift, and Frequency.

$$(7) y = -3 \sin\left(\frac{x}{3} + \frac{\pi}{6}\right) + 4$$

$$(8) y = 2 \cos\left(\frac{3}{2}x - \frac{\pi}{4}\right)$$