

Graphing Trig Functions Test Review

Find the key information.

1. $y = 4 - 2 \sin x$

Vertical shift: _____ Sinusoidal axis: _____ Reflected? _____

Amplitude: _____ Domain: _____ Range: _____

Period: _____ Horizontal shift: _____

2. $y = -1 + 3 \cos 2(x + \pi)$

Vertical shift: _____ Sinusoidal axis: _____ Reflected? _____

Amplitude: _____ Domain: _____ Range: _____

Period: _____ Horizontal shift: _____

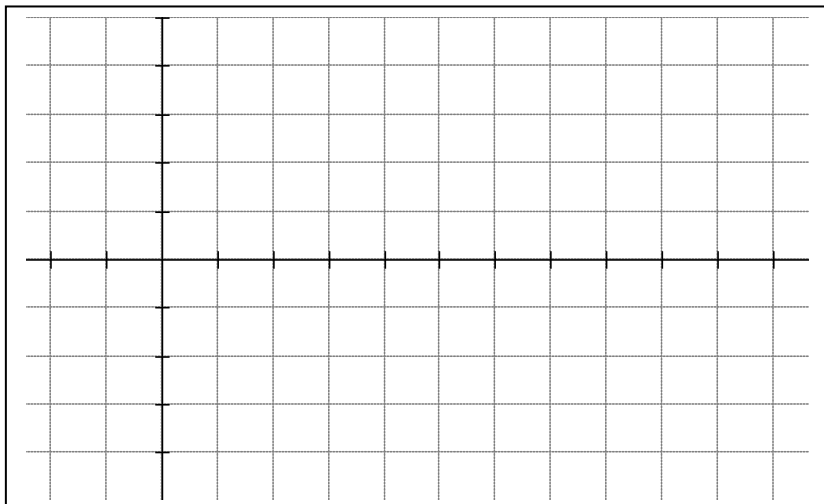
Find the key information and sketch the graph of the function.

3. $y = -2 + 3 \sin x$

Vertical shift: _____ Sinusoidal axis: _____ Reflected? _____

Amplitude: _____ Domain: _____ Range: _____

Period: _____ Horizontal shift: _____

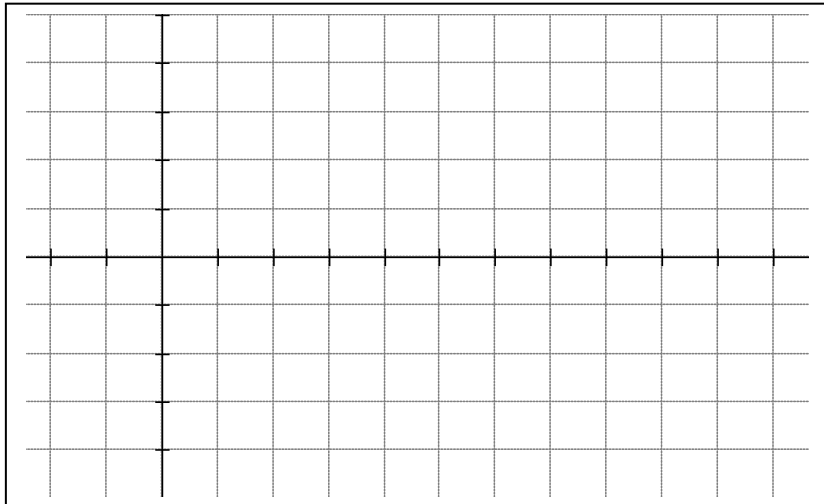


4. $y = -3\sin 2x$

Vertical shift: _____ Sinusoidal axis: _____ Reflected? _____

Amplitude: _____ Domain: _____ Range: _____

Period: _____ Horizontal shift: _____

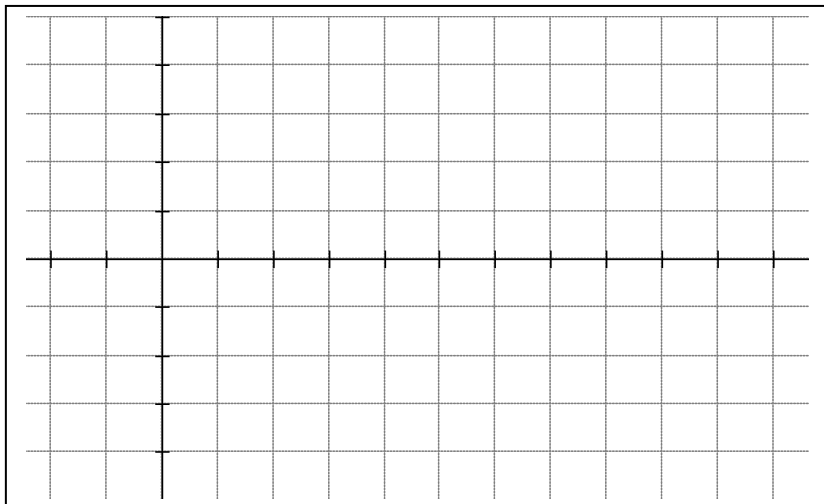


5. $y = 1 + \cos 4x$

Vertical shift: _____ Sinusoidal axis: _____ Reflected? _____

Amplitude: _____ Domain: _____ Range: _____

Period: _____ Horizontal shift: _____

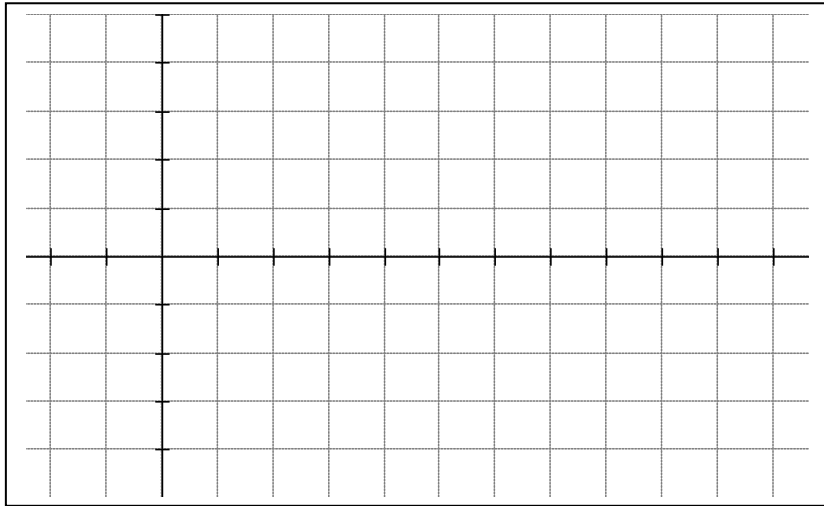


6. $y = -4 \cos(x - \pi)$

Vertical shift: _____ Sinusoidal axis: _____ Reflected? _____

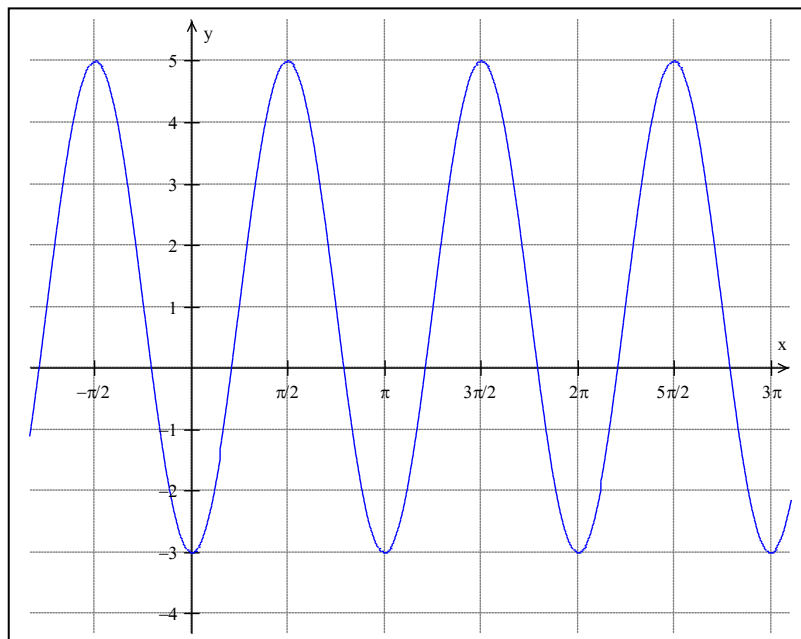
Amplitude: _____ Domain: _____ Range: _____

Period: _____ Horizontal shift: _____



7. Use the given graph to find the key information and write the equation as a sine function and as a cosine function.

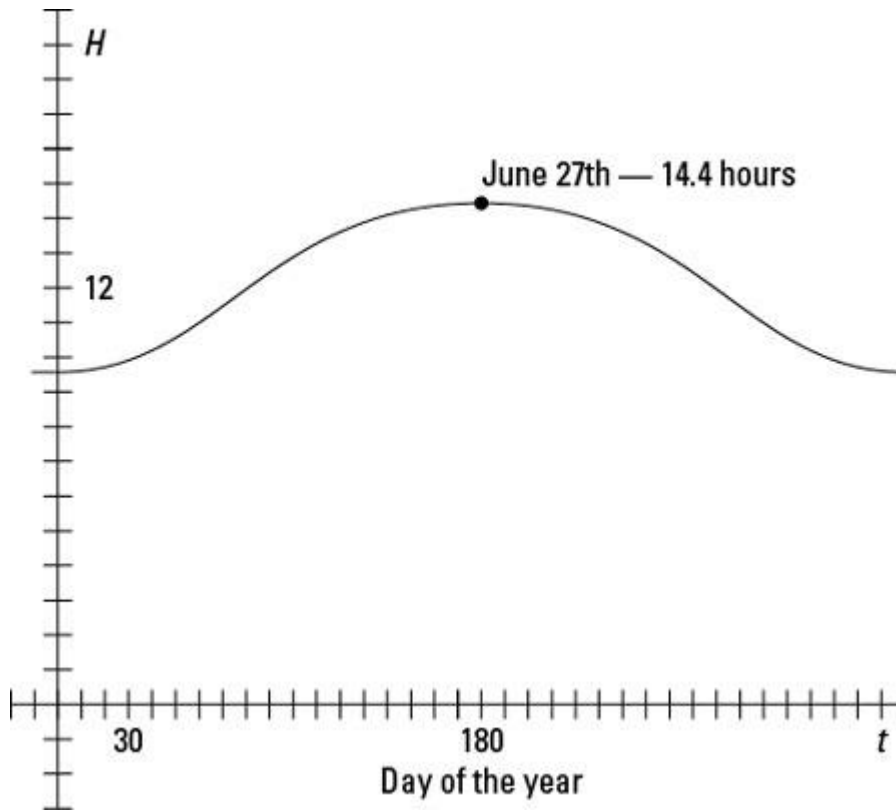
Vertical shift: _____ Sinusoidal axis: _____ Amplitude: _____ Period: _____



Sine function: _____

Cosine function: _____

8. San Diego, California, is a gorgeous part of the world. Whether it's summer or winter, you want to be there. But what if you're someone who likes long, sunny days? When is the best time to go there? Assume that the following formula gives you the number of hours of daylight in San Diego when you input any day of the year. Letting t be the day of the year (from 1 to 365), you can figure the number of hours of sunlight, H , if you enter a value for t in the equation $H(t) = 2.4 \sin(0.017t - 1.377) + 12$. The following figure shows the graph of this equation.



- What is the average number of hours of daylight throughout the year in San Diego?
- What is the minimum amount of daylight hours? What is the maximum amount of daylight hours?
- What is the period of the function?
- How many hours of daylight occur on Day 350?