Secondary Math II
HW 10-4

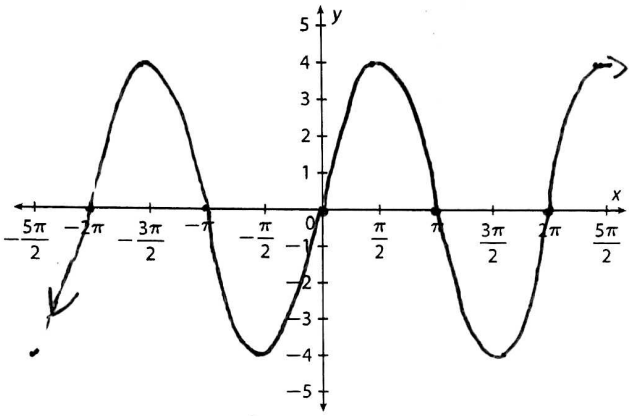
Name Selected Answers

Date_____Per_____

Graphs of Trig Functions

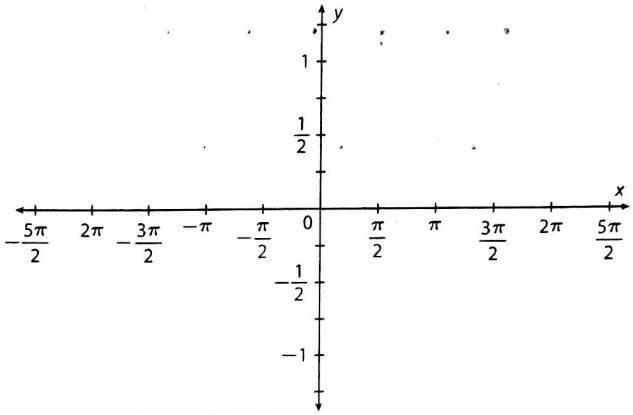
For each trig function, identify the amplitude, period, frequency, phase shift, and vertical shift of each function. Then graph the function.

1. $y = 4 \sin x$



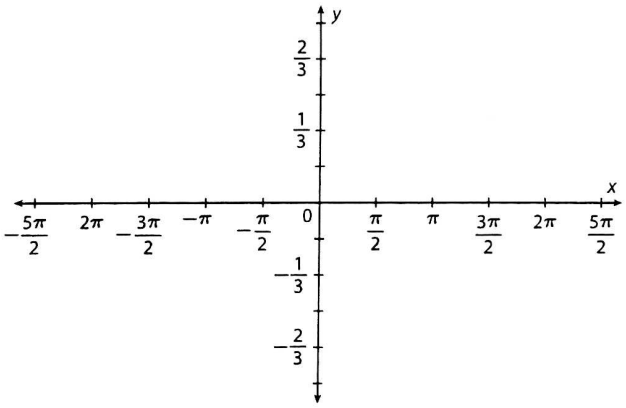
Amplitude: 4
Period: 2π
Frequency: 1
Phase Shift: none
Vertical Shift: none

2. $y = \frac{1}{2} \cos 2x$



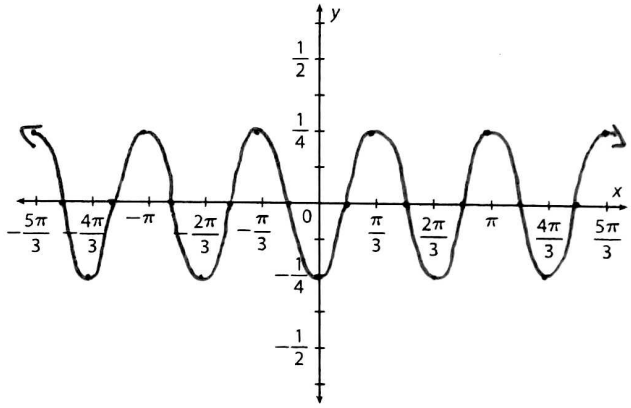
Amplitude:
Period:
Frequency:
Phase Shift:
Vertical Shift:

5. $y = \frac{1}{3} \sin 2x$



Amplitude:
Period:
Frequency:
Phase Shift:
Vertical Shift:

6. $y = -\frac{1}{4} \cos 3x$



Amplitude: $1/4$
Period: $2\pi/3$
Frequency: 3
Phase Shift: none
Vertical Shift: none

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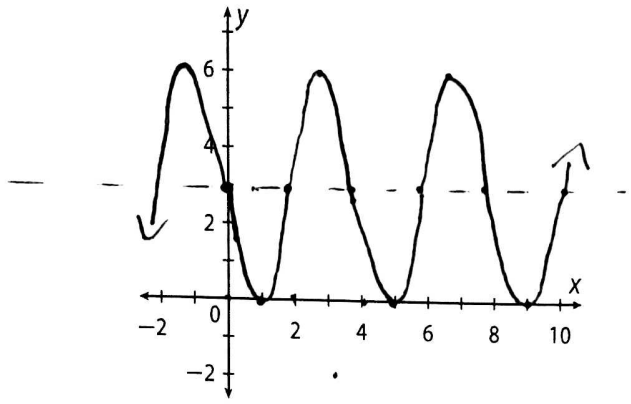
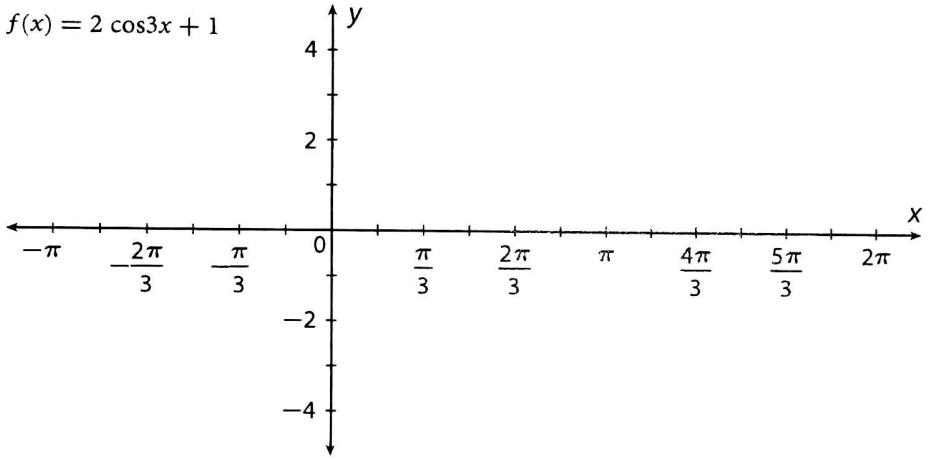
4. $f(x) = 3\sin\frac{\pi}{2}(x-2)+3$



Amplitude: 3
Period: 4
Frequency: $\pi/2$
Phase Shift: right 2
Vertical Shift: up 3

2. $f(x) = 2\cos 3x + 1$

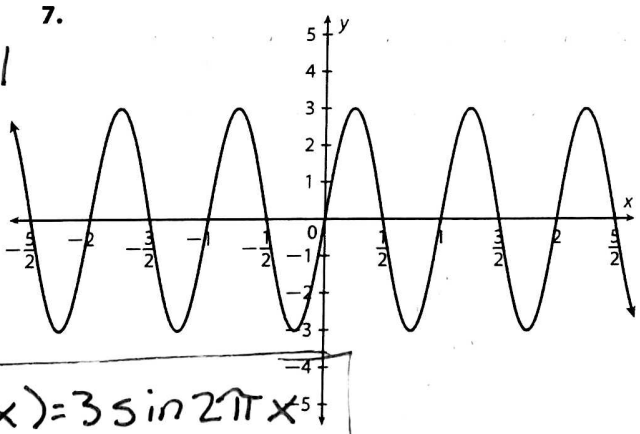


Amplitude:
Period:
Frequency:
Phase Shift:
Vertical Shift:

Write an equation for each graph.

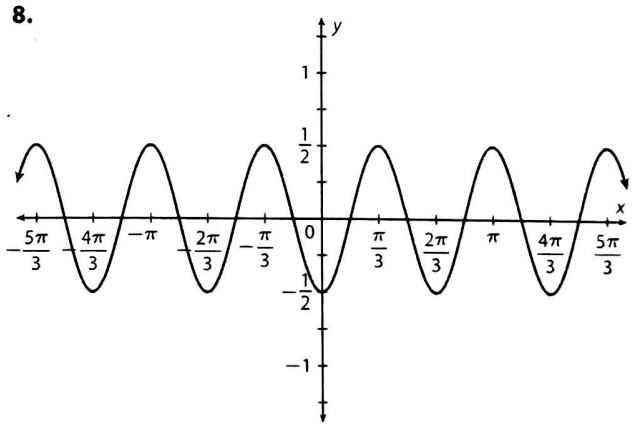
7.

$\frac{2\pi}{b} = 1$



$\boxed{f(x) = 3\sin 2\pi x}$

8.



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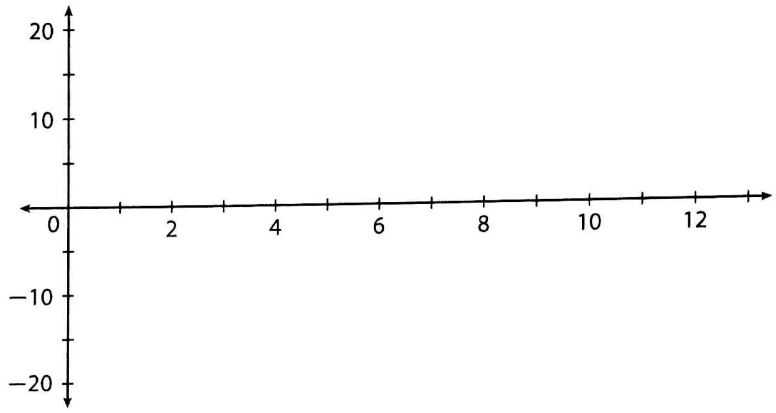
14. Physics A mass attached to a spring oscillates up and down every 2 seconds. Draw a graph of the vertical displacement of the mass relative to its position at rest if the spring is stretched to a length of 15 cm before the mass is released.



Review:

Find the following without a calculator.

16. $\sin\left(\frac{\pi}{6}\right) = \frac{1}{2}$

17. $\cos\left(\frac{\pi}{3}\right)$

18. $\tan\left(\frac{\pi}{4}\right) = 1$

19. $\sec\left(\frac{3\pi}{4}\right)$

20. $\cot\left(\frac{5\pi}{3}\right) = \frac{\sqrt{3}}{3}$

21. $\csc\left(\frac{7\pi}{6}\right)$