

Graphs of Sine and Cosine Functions 1

Graph each of the following.

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

2. $f(x) = 3 \sin\left(x + \frac{\pi}{6}\right)$

3. $f(x) = \cos\left(x + \frac{\pi}{2}\right)$

4. $f(x) = 4 \cos\left(x - \frac{\pi}{4}\right)$

5. $f(x) = 2 \sin(2x - \pi) + 1$

6. $f(x) = -\cos(3x - \pi) - 2$

7. $f(x) = -2 \sin(3x - \pi)$

8. $f(x) = \sin\left(\frac{1}{2}x - \frac{\pi}{3}\right)$

9. $f(x) = 6 \sin \pi x$

10. $f(x) = 2 \cos \frac{\pi}{2} x$

11. $f(x) = \frac{1}{2} \sin 2\pi x$

12. $f(x) = 5 \sin\left(3x - \frac{\pi}{2}\right)$

13. $f(x) = 3 \cos\left(\frac{1}{2}x - \frac{\pi}{4}\right)$

14. $f(x) = -5 \cos\left(\frac{1}{3}x + \frac{\pi}{6}\right)$

15. $f(x) = 3 \cos(\pi x + 4\pi)$

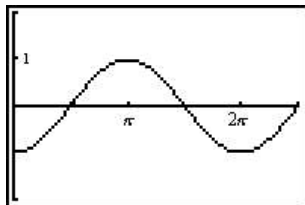
16. $f(x) = -2 \sin(2x - \pi) + 3$

Graphs of Sine and Cosine Functions 1

Graph each of the following.

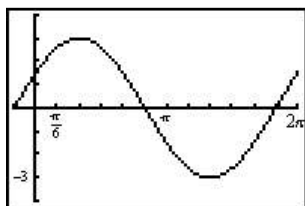
1. $f(x) = \sin\left(x - \frac{\pi}{2}\right)$

Amp: 1
Period: 2π
HPS: $\frac{\pi}{2}$
VPS: 0



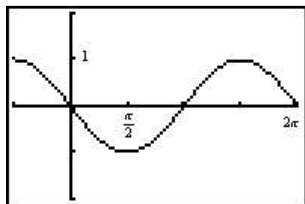
2. $f(x) = 3\sin\left(x + \frac{\pi}{6}\right)$

Amp: 2
Period: 2π
HPS: $-\frac{\pi}{6}$
VPS: 0



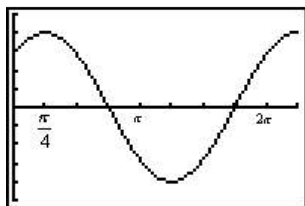
3. $f(x) = \cos\left(x + \frac{\pi}{2}\right)$

Amp: 1
Period: 2π
HPS: $-\frac{\pi}{2}$
VPS: 0



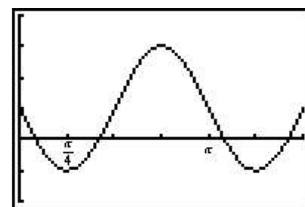
4. $f(x) = 4\cos\left(x - \frac{\pi}{4}\right)$

Amp: 4
Period: 2π
HPS: $\frac{\pi}{4}$
VPS: 0



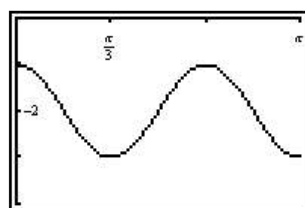
5. $f(x) = 2\sin(2x - \pi) + 1$

Amp: 2
Period: π
HPS: $\frac{\pi}{2}$
VPS: 1



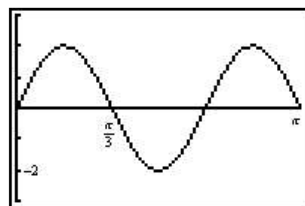
6. $f(x) = -\cos(3x - \pi) - 2$

Amp: 1
Period: $\frac{2\pi}{3}$
HPS: $\frac{\pi}{3}$
VPS: -2



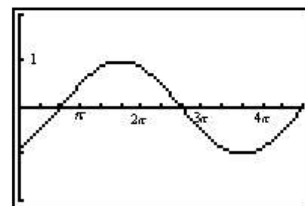
7. $f(x) = -2\sin(3x - \pi)$

Amp: 2
Period: $\frac{2\pi}{3}$
HPS: $\frac{\pi}{3}$
VPS: 0



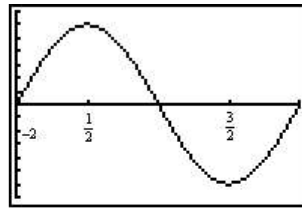
8. $f(x) = \sin\left(\frac{1}{2}x - \frac{\pi}{3}\right)$

Amp: 1
Period: 4π
HPS: $\frac{2\pi}{3}$
VPS: 0



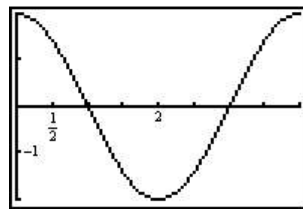
9. $f(x) = 6 \sin \pi x$

Amp: 6
 Period: 2
 HPS: 0
 VPS: 0



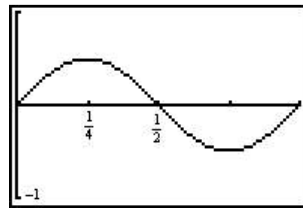
10. $f(x) = 2 \cos \frac{\pi}{2} x$

Amp: 2
 Period: 4
 HPS: 0
 VPS: 0



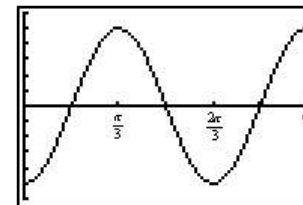
11. $f(x) = \frac{1}{2} \sin 2\pi x$

Amp: $\frac{1}{2}$
 Period: 1
 HPS: 0
 VPS: 0



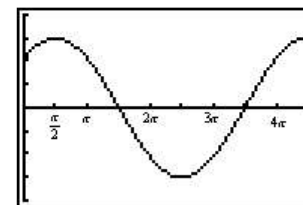
12. $f(x) = 5 \sin \left(3x - \frac{\pi}{2} \right)$

Amp: 5
 Period: $\frac{2\pi}{3}$
 HPS: $\frac{\pi}{6}$
 VPS: 0



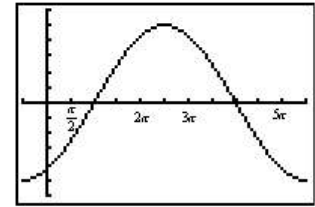
13. $f(x) = 3 \cos \left(\frac{1}{2} x - \frac{\pi}{4} \right)$

Amp: 2
 Period: 4π
 HPS: $\frac{\pi}{2}$
 VPS: 0



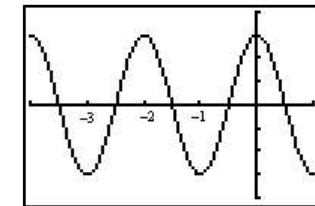
14. $f(x) = -5 \cos \left(\frac{1}{3} x + \frac{\pi}{6} \right)$

Amp: 5
 Period: 6π
 HPS: $-\frac{\pi}{2}$
 VPS: 0



15. $f(x) = 3 \cos(\pi x + 4\pi)$

Amp: 3
 Period: 2
 HPS: -4
 VPS: 0



16. $f(x) = -2 \sin(2x - \pi) + 3$

Amp: 2
 Period: π
 HPS: $\frac{\pi}{2}$
 VPS: 3

