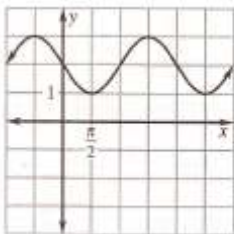
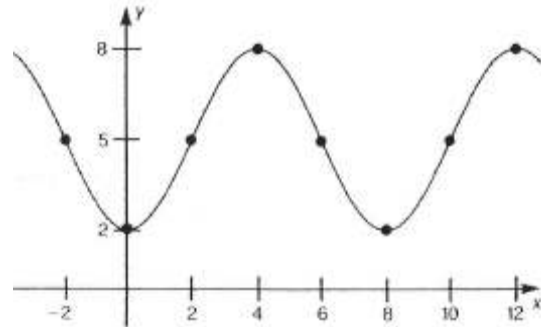
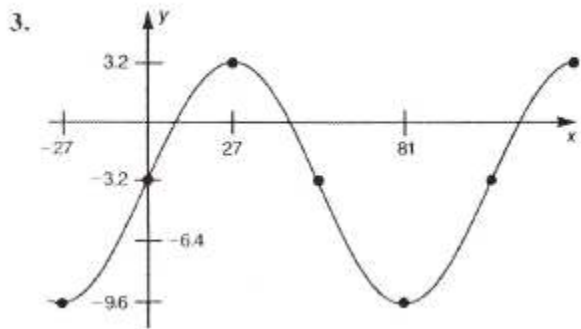
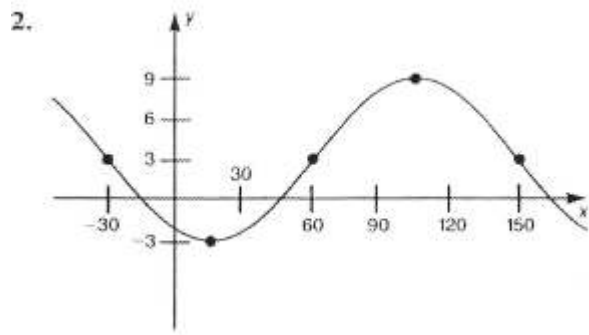
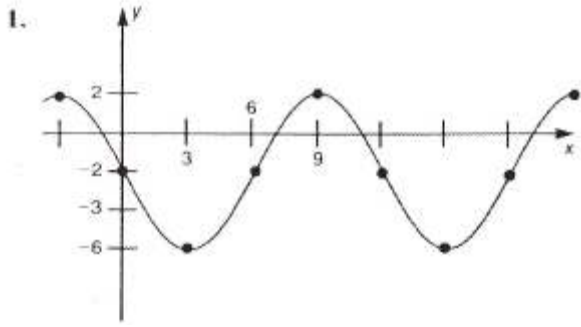
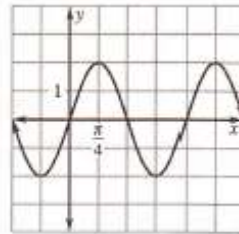


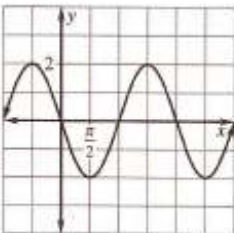
Find the cosine and sine functions of the graphs below. (#2 and #3 are in degrees)



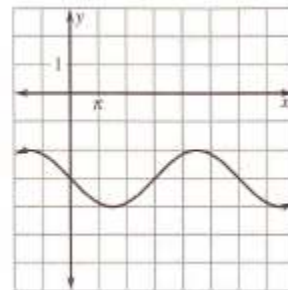
5.



6.



7.



8.

Graph the functions below.

9. $y = \frac{1}{2} \sin\left(x + \frac{\pi}{2}\right)$

10. $y = 2 + \cos\left(x - \frac{\pi}{2}\right)$

11. $y = 2 - \cos(x - \pi)$

12. $y = -3 + \sin \pi x$

13. Solve $2 \sin 3x = -1$ for $0 \leq x < 2\pi$

14. Solve $2 \sin 2x = -\sqrt{3}$ for $0 \leq x < 2\pi$

15. Solve $\sqrt{2} \cos x + 1 = 0$ for $0 \leq x < 2\pi$

16. Solve $3 - \csc x = 7$ for $0 \leq x < 2\pi$

17. Solve $2 \sin 3x = \sqrt{2}$ for $0 \leq x < 2\pi$

18. Solve $5 \cos \theta = -1$ for $0 \leq x < 360^\circ$

Answers:

$$y = -4 \sin \frac{\pi}{6} x - 2$$

$$y = 4 \sin \frac{\pi}{6} (x - 6) - 2$$

1.

$$y = 4 \cos \frac{\pi}{6} (x + 3) - 2$$

$$y = -4 \cos \frac{\pi}{6} (x - 3) - 2$$

$$y = 6 \sin 2(x - 60^\circ) + 3$$

$$2. y = -6 \sin 2(x + 30^\circ) + 3$$

$$y = -6 \cos 2(x - 15^\circ) + 3$$

$$y = 6.4 \sin \frac{10}{3} x - 3.2$$

3.

$$y = 6.4 \cos \frac{10}{3} (x - 27) - 3.2$$

$$y = -3 \cos \frac{\pi}{4} x + 5$$

$$4. y = 3 \sin \frac{\pi}{4} (x - 2) + 5$$

$$y = 3 \cos \frac{\pi}{4} (x - 4) + 5$$

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

5.

$$y = \cos \left(x + \frac{\pi}{2} \right) + 2$$

$$y = 2 \sin 2x$$

$$6. y = 2 \cos 2 \left(x - \frac{\pi}{4} \right)$$

$$y = -2 \sin x$$

7.

$$y = 2 \cos \left(x + \frac{\pi}{2} \right)$$

$$y = -\sin \frac{1}{3} x - 3$$

8.

$$y = \cos \frac{1}{3} \left(x + \frac{3\pi}{2} \right) - 3$$

9. Key points: $\left(-\frac{\pi}{2}, 0 \right); \left(0, \frac{1}{2} \right); \left(\frac{\pi}{2}, 0 \right); \left(\pi, -\frac{1}{2} \right); \left(\frac{3\pi}{2}, 0 \right)$; Scale: $\frac{\pi}{2}$

10. Key points: $(0, 2); \left(\frac{\pi}{2}, 3 \right); (\pi, 2); \left(\frac{3\pi}{2}, -1 \right); (2\pi, 2)$; Scale: $\frac{\pi}{2}$

11. Key points: $(0, 3); \left(\frac{\pi}{2}, 2 \right); (\pi, 1); \left(\frac{3\pi}{2}, 2 \right); (2\pi, 3)$; Scale: $\frac{\pi}{2}$

12. Key points; $(0, -3); \left(\frac{1}{2}, -2 \right); (1, -3); \left(\frac{3}{2}, -4 \right); (2, -3)$; Scale: $\frac{1}{2}$

13. $\frac{7\pi}{18}; \frac{11\pi}{18}; \frac{19\pi}{18}; \frac{31\pi}{18}; \frac{35\pi}{18}$

14. $\frac{2\pi}{3}; \frac{5\pi}{6}; \frac{5\pi}{3}; \frac{11\pi}{6}$

15. $\frac{3\pi}{4}; \frac{5\pi}{4}$

16. 3.39; 6.03

17. $\frac{\pi}{12}; \frac{\pi}{4}; \frac{3\pi}{4}; \frac{11\pi}{12}; \frac{17\pi}{12}; \frac{19\pi}{12}$

18. $101.5^\circ; 258.5^\circ$