

Graph one cycle of the following graphs:

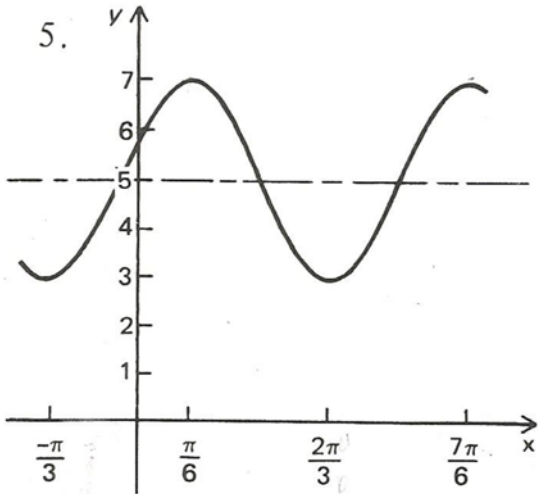
1. $y = 3 + 2 \cos\left(\frac{1}{5}(x - \pi)\right)$

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

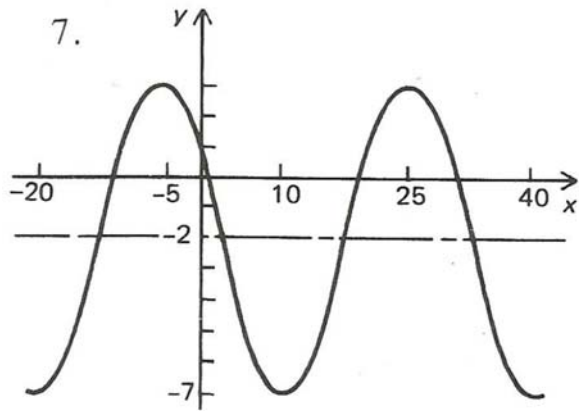
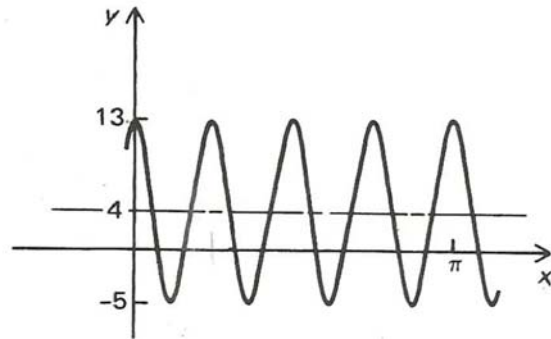
3. $y = 2 + 6 \sin\frac{\pi}{4}(x - 1)$

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

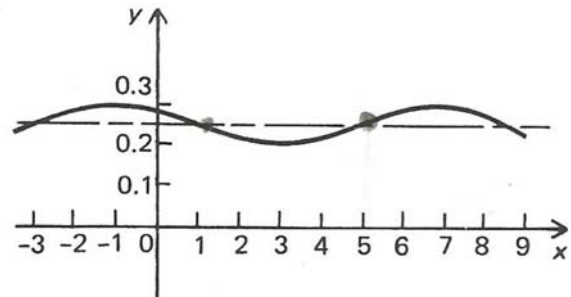
Write 2 equations for the following graphs. One must be a cosine and the other must be a sine equation.



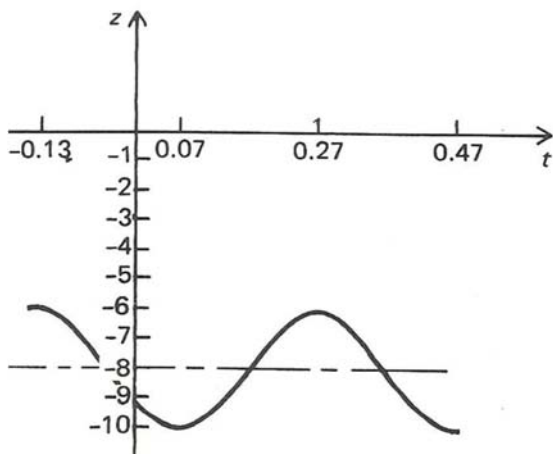
6.



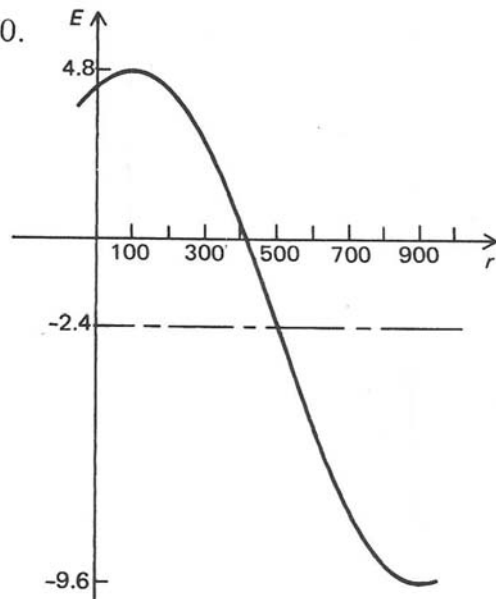
8.



9.

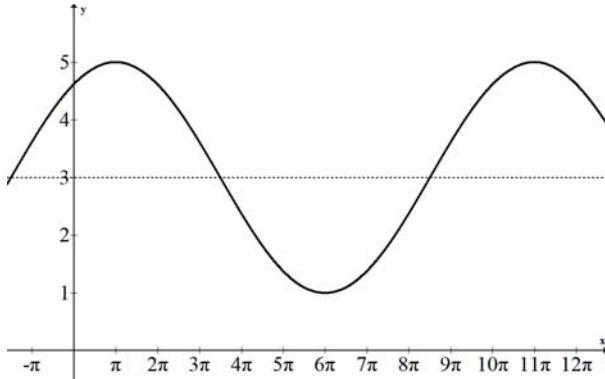


10.

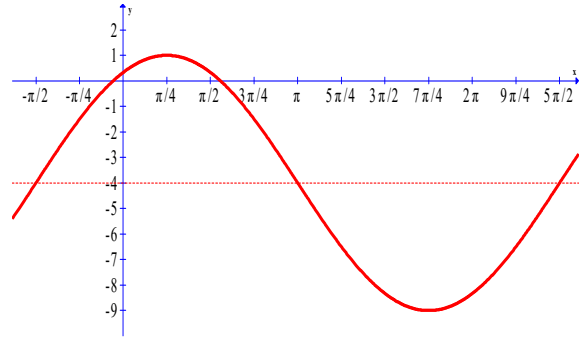


Answers

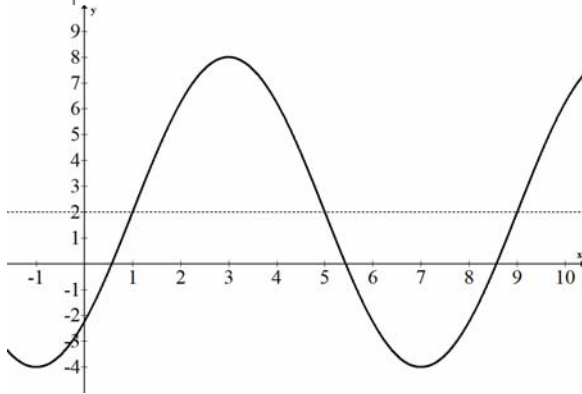
1.



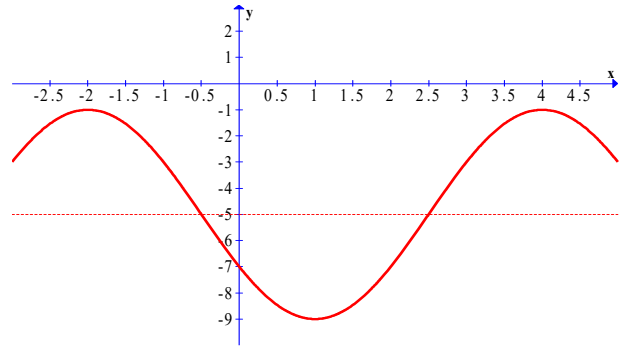
2.



3.



4.



5.

$$y = 5 + 2 \cos 2 \left(x - \frac{\pi}{6} \right)$$

$$y = 5 + 2 \sin 2 \left(x + \frac{\pi}{12} \right)$$

6.

$$y = 4 + 9 \cos 8x$$

$$y = 4 + 9 \sin 8 \left(x + \frac{\pi}{16} \right)$$

7.

$$y = -2 + 5 \cos \frac{\pi}{15} (x + 5)$$

$$y = -2 + 5 \sin \frac{\pi}{15} (x + 12.5)$$

8.

$$y = 0.25 + 0.05 \cos \frac{\pi}{4} (x + 1)$$

$$y = 0.25 + 0.05 \sin \frac{\pi}{4} (x + 3)$$

9.

$$y = -8 + 2 \cos 5\pi (x + 0.13)$$

$$y = -8 + 2 \sin 5\pi (x - 0.17)$$

10.

$$y = -2.4 + 7.2 \cos \frac{\pi}{800} (x - 100)$$

$$y = -2.4 + 7.2 \sin \frac{\pi}{800} (x + 300)$$