

Name: _____

Graphs of Sine and Cosine Functions

Exercise 1: Sketch the graph of the function. (Include two full periods.)

1) $y = 3 \sin x$

2) $y = 2 + \frac{1}{10} \cos 60\pi x$

3) $y = \frac{1}{3} \cos x$

4) $y = \frac{1}{4} \sin x$

5) $y = 4 \cos x$

6) $y = 2 \cos x - 3$

7) $y = 4 \cos\left(x + \frac{\pi}{4}\right) + 4$

8) $y = -3 \cos(6x + \pi)$

9) $y = \cos \frac{x}{2}$

10) $y = 3 \cos(x + \pi) - 3$

11) $y = \sin 4x$

12) $y = \cos 2\pi x$

13) $y = -3 \cos(6x + \pi)$

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

15) $y = \sin \frac{\pi x}{4}$

16) $y = -\sin \frac{2\pi x}{3}$

17) $y = -10 \cos \frac{\pi x}{6}$

18) $y = \frac{1}{100} \sin 120\pi t$

19) $y = \sin\left(x - \frac{\pi}{4}\right)$

20) $y = \sin(x - \pi)$

21) $y = 3 \cos(x + \pi)$

22) $y = 4 \cos\left(x + \frac{\pi}{4}\right)$

23) $y = -3 + 5 \cos \frac{\pi t}{12}$

24) $y = 2 - \sin \frac{2\pi x}{3}$

25) $y = -2 \sin(4x + \pi)$

26) $y = \frac{1}{100} \sin 120\pi t$

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

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

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

30) $y = -0.1 \sin\left(\frac{\pi x}{10} + \pi\right)$