Name _____ Class _____ Date _____

Practice 9-4

Mixed Exercises

Use a graphing calculator to solve each equation in the interval from 0 to 2π.

1. $\sin \frac{\pi}{4}\theta = 0.2$

2. $-2 \sin 2\theta = 1$

3. $5 \sin \frac{\pi}{4}\theta = 0.5$

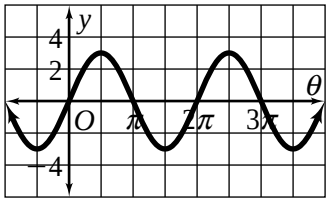
4. $-4 \sin 2\theta = -1.1$

5. $2 \sin \frac{\pi}{4}\theta = 0.25$

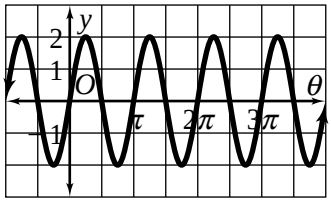
6. $3 \sin 4\theta = 2$

Find the amplitude and period of each sine curve. Then write an equation for each curve.

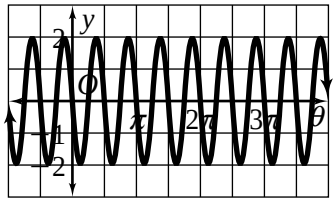
7.



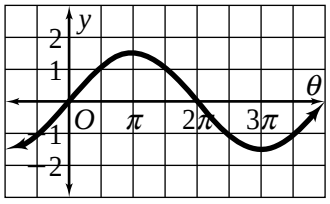
8.



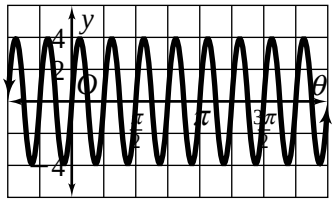
9.



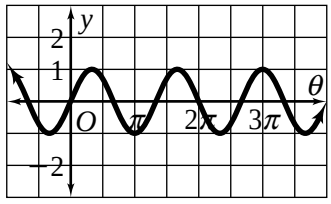
10.



11.



12.



Sketch the graph of each sine curve in the interval from 0 to 2π.

13. $y = 2 \sin \theta$

14. $y = -2 \sin 4\theta$

15. $y = \sin 2\theta$

16. $y = 3 \sin \frac{\theta}{2}$

17. $y = -\sin 2\theta$

18. $y = -5 \sin 3\theta$

19. $y = -3 \sin 2\theta$

20. $y = 4 \sin 5\theta$

21. $y = -4 \sin \frac{\theta}{2}$

Sketch the graph of each sine curve. Then write an equation for each curve.

22. $a = 1$, period $= \pi$

23. $a = 2, b = 2\pi$

24. $a = 3$, period $= \frac{\pi}{2}$

25. $a = -1$, period $= \frac{\pi}{2}$

26. $a = -5, b = \frac{3\pi}{4}$

27. $a = 5$, period $= \frac{\pi}{4}$

28. $a = -2$, period $= \frac{\pi}{4}$

29. $a = 3, b = \frac{5\pi}{4}$

30. $a = -4$, period $= 2\pi$