Solve each trigonometric equation on the interval [0, 2π):

\[ \frac{3\sin x}{\sqrt{3}} = \frac{1}{2} \]

11. Given \( \sin x + \cos x = \frac{\sqrt{2}}{2} \) and \( \sin x - \cos x = \frac{\sqrt{2}}{2} \) find the exact values of \( \sin x \) and \( \cos x \).

12. Given \( \sin x = \frac{3}{4} \) and \( \cos x = \frac{5}{4} \) find the exact values of \( \sin 2x \) and \( \cos 2x \).

13. Given \( \tan x = \frac{3}{4} \) and \( \sec x = \frac{5}{4} \) find the exact values of \( \sin x \) and \( \cos x \).
43. Give the period of $y = 2\sin(\frac{x}{3})$.

44. Give the amplitude of $y = 3\cos(x)$.

42. Key words: amplitude, period, $y = \sin(x)$.

41. When are the x-intercepts of the graph $y = 2\cos(2x)$?

40. When are the x-intercepts of the graph $y = 3\sin(x)$?

39. Where does the maximum value occur for $y = \sin(x) + 2$? Normal, max or max.

38. Give the minimum value of one period of $y = 2\cos(3x) - 5$.

37. Give the maximum value of one period of $y = \tan(x)$.

36. Give the solutions for $x$ in the interval $[0, 2\pi]$.

35. Solve $\sin(x) = \frac{1}{2}$ for $x$ in $[0, 2\pi]$.

34. Give the solutions for $y = 4 - x$.

33. Solve $2\cos(x) = -3$.

32. The value of $\sin(x)$ will be: negative, 0, positive.

31. Identify the quadrant(s) where $\cos(x) > 0$ and the sine $< 0$.

30. Find the exact value of $\tan(\frac{\pi}{4})$.

29. Find the value of $\cos(\pi/3)$.

28. Consider a periodic function. The graph given specifies the sign of the value of a function.

27. Students will utilize the unit circle to determine the location of the terminal ray of an angle.

26. $\cos(x) + \sin(x) = 1$.

25. $\sin(x) + \cos(x) = 1$.

24. $\sin(x) = \frac{1}{2}$.

23. $\cos(x) = \frac{1}{2}$. 

22. $\sin(x) = \frac{\sqrt{3}}{2}$.

21. $\cos(x) = \frac{\sqrt{3}}{2}$.