

Worksheet 15 - Graphing Trigonometric Functions

In Exercises 1 - 12, graph one cycle of the given function. State the period, amplitude, phase shift and vertical shift of the function.

1. $y = 3 \sin(x)$

2. $y = \sin(3x)$

3. $y = -2 \cos(x)$

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

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

6. $y = \sin(2x - \pi)$

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

8. $y = \cos(3x - 2\pi) + 4$

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

10. $y = \frac{2}{3} \cos\left(\frac{\pi}{2} - 4x\right) + 1$

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

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

In Exercises 13 - 24, graph one cycle of the given function. State the period of the function.

13. $y = \tan\left(x - \frac{\pi}{3}\right)$

14. $y = 2 \tan\left(\frac{1}{4}x\right) - 3$

15. $y = \frac{1}{3} \tan(-2x - \pi) + 1$

16. $y = \sec\left(x - \frac{\pi}{2}\right)$

17. $y = -\csc\left(x + \frac{\pi}{3}\right)$

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

19. $y = \csc(2x - \pi)$

20. $y = \sec(3x - 2\pi) + 4$

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

22. $y = \cot\left(x + \frac{\pi}{6}\right)$

23. $y = -11 \cot\left(\frac{1}{5}x\right)$

24. $y = \frac{1}{3} \cot\left(2x + \frac{3\pi}{2}\right) + 1$