

1. Explain how the graph of the sine function can be used to graph $y = \csc x$.
5. How does the period of $y = \csc x$ compare with the period of $y = \sin x$?

For the following exercises, match each trigonometric function with one of the graphs in **Figure 18**.

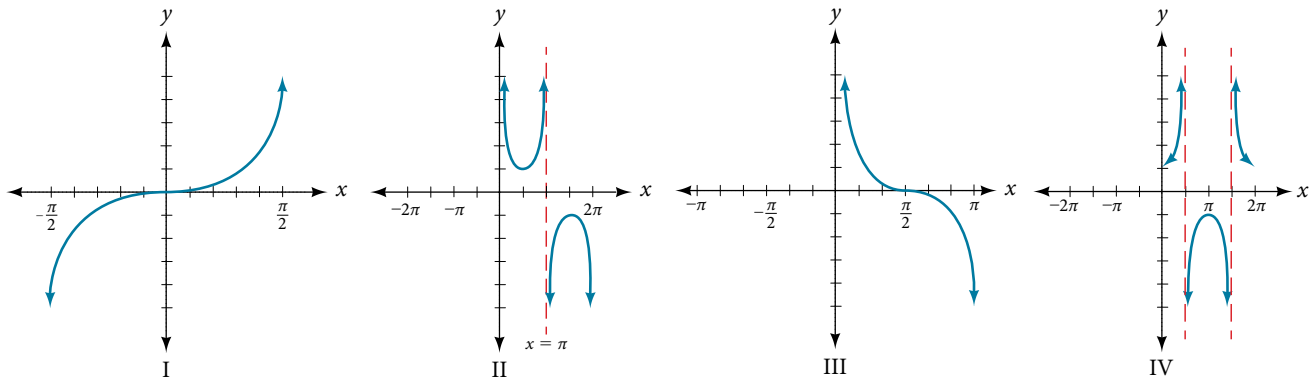


Figure 18

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|--------------------|--------------------|
| 6. $f(x) = \tan x$ | 7. $f(x) = \sec x$ |
| 8. $f(x) = \csc x$ | 9. $f(x) = \cot x$ |

For the following exercises, find the period and horizontal shift of each of the functions.

12. $m(x) = 6\csc\left(\frac{\pi}{3}x + \pi\right)$	11. $h(x) = 2\sec\left(\frac{\pi}{4}(x + 1)\right)$
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| 14. If $\sec x = 2$, find $\sec(-x)$. | 15. If $\csc x = -5$, find $\csc(-x)$. |
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For the following exercises, sketch two periods of the graph for each of the following functions. Identify the stretching factor, period, and asymptotes.

20. $h(x) = 2\sec\left(\frac{\pi}{4}(x + 1)\right)$

21. $m(x) = 6\csc\left(\frac{\pi}{3}x + \pi\right)$

28. $f(x) = -\frac{1}{4}\csc(x)$

29. $f(x) = 4\sec(3x)$

30. $f(x) = -3\cot(2x)$

31. $f(x) = 7\sec(5x)$

32. $f(x) = \frac{9}{\pi}\csc(\pi x)$

For the following exercises, find an equation for the graph of each function.

