

List all identities equivalent to the given trig function.

1. $\sin x =$

$\sin x =$

2. $\cos x =$

$\cos x =$

$\cos x =$

3. $\tan x =$

$\tan x =$

$\tan x =$

4. $\csc x =$

$\csc x =$

5. $\sec x =$

$\sec x =$

$\sec x =$

6. $\cot x =$

$\cot x =$

$\cot x =$

Fill in the blanks and/or complete each trig identity.

7. $\sin^2 x + \underline{\hspace{2cm}} = 1$

8. $\sin x(\underline{\hspace{2cm}}) = \cos x$

9. $\frac{\sin x}{\cos x} =$

10. $\sin(-x) =$

11. $\sec^2 x =$

12. $\frac{1}{\cos x} =$

Other identities can be formed by rearranging the basic trig identities.

Fill in the blanks to create other identities *that you did not already list on the front side!*

13. $\sin^2 x =$ _____

14. $\sin x = -$ _____

15. $\sin x = (\text{_____}) \cdot (\text{_____})$

16. $\tan^2 x =$ _____

17. $\sin x = \frac{(\text{_____})}{(\text{_____})}$

17. $1 + \cot^2 x =$ _____

**By manipulating the basic trig identities, you can create nine expressions that are equivalent to 1!
Write these 9 identities that are all equivalent to 1.**
