**WORKSHEET V**

**trigonometric limits *(review)***

******

I Evaluate each of the following limits or explain why the limit fails to exist.

**

**

**

**

**

**

**

**

**

**

**

**

**

**

**

**

**



**

**II** 1*.* Prove that $\lim\_{x\to 0}\frac{\sin(x)}{x}.$

2. Prove, using (1) and a trigonometric identity, that $\lim\_{x\to 0}\frac{1-\cos(x)}{x}=0.$

*I used to love mathematics for its own sake, and I still do, because it allows for no hypocrisy and no vagueness…*

- Stendhal, **The Life of Henri Brulard**



 [Course Home Page](http://www.math.luc.edu/~ajs/courses/161fall2017/index.pdf)          [Department Home Page](http://www.math.luc.edu/)        [Loyola Home Page](http://www.luc.edu/)