

MATH 220: CALCULUS I  
WORKSHEET 15  
MARCH 7, 2013

1. Evaluate the following limits.

(a)  $\lim_{x \rightarrow 1} \frac{\sin(x) - 1}{x^2 + 1}$

(b)  $\lim_{x \rightarrow \infty} \left( \sin \left( \frac{1}{x} \right)^{2x} \right)$

(c)  $\lim_{w \rightarrow -\infty} \frac{e^{-w}}{\ln(1 - w)}$

(d)  $\lim_{x \rightarrow \infty} x \tan \left( \frac{1}{x} \right)$

$$(e) \lim_{t \rightarrow \infty} \frac{t^{10}}{e^{t^2}}$$

$$(f) \lim_{x \rightarrow 0^+} x^{\sqrt[3]{x}}$$

$$(g) \lim_{x \rightarrow 0} \frac{x - \sin x}{x - \tan x}$$