

MATH 221 QUIZ 8
NOVEMBER 11, 2013

Solve the following two problems, showing all your work.

- (1) Use l'Hôpital's rule to compute the following limit:

$$\lim_{x \rightarrow \pi/2} \frac{\cos(x)}{\sin(2x)}$$

- (2) Consider the function

$$f(x) = \ln((\cos x)^2).$$

Determine the intervals on which the function is increasing and on which it is decreasing.