

College of the Holy Cross, Spring Semester, 2011
Department of Mathematics and Computer Science
Problem of the Week #4: April 18, 2011

What calculus student doesn't like l'Hôpital's rule? It makes short work of a number of otherwise-difficult limit problems.

Doesn't it...?

Problem 4 Let a be a real number. Find the limit, with justification:

$$\lim_{x \rightarrow +\infty} e^{e^{e^x + e^{-(a+x+e^x+e^{e^x})}}} - e^{e^{e^x}}$$