

**ZMATH 2009d.00430**

**Kreminski, Rick**

**Visualizing the chain rule (for functions over  $\mathbb{R}$  and  $\mathbb{C}$ ) and more.**

Int. J. Math. Educ. Sci. Technol. 40, No. 2, 277-287 (2009).

Summary: A visual approach to understanding the chain rule and related derivative formulae, for functions from  $\mathbb{R}$  to  $\mathbb{R}$  and from  $\mathbb{C}$  to  $\mathbb{C}$ , is presented. This approach has been successfully used with several audiences: students first studying calculus, students with some background in linear algebra, students beginning study of functions of a complex variable, and current secondary school teachers obtaining professional development.

*Classification:* I45 I85

*Keywords:* chain rule; complex chain rule; singular value decomposition; visualization

doi:10.1080/00207390802276143