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and **Tetyana Berezovski**. *Ice Math: Related Rates and Pairs Figure Skating*.

In light of the upcoming Winter Olympic Games in February 2014, a mathematical modeling problem is presented in the context of pairs figure skating. Prospective high school teachers used related rates to solve a problem that involves differentiation, the Pythagorean Theorem, and trigonometric equations relevant to a pairs skating element, the death spiral. To complete the death spiral, the man pivots in a small circle on the ice while the lady glides in a concentric circle with a larger radius around the man. Students were asked to find the instantaneous rate of change of the man's height while performing the death spiral, as well as the relationship between the man's height and the angle of inclination, formed by the lady's blade and the ice surface. Students' work is analyzed and discussed. (Received July 15, 2013)