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Comparing Student Understanding of Addition of Vectors for Multiple Points of Instruction and Physical Contexts PAUL EMIGH, PETER SHAFFER, Univ of Washington — The Physics Education Group at the University of Washington has been examining student understanding of addition of vectors throughout introductory physics. We present results from the administration of a qualitative question about the magnitudes of vector sums to students in the first, second, and third quarters of a calculus-based introductory physics course. We also compare student performance on versions of this question asked for a variety of different physical contexts, including velocity, force, and momentum.

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