

ZMATH 2002b.01530

Watson, Jane M.; Moritz, Jonathan B.

School students' reasoning about conjunction and conditional events.

Int. J. Math. Educ. Sci. Technol. 33, No. 1, 59-84 (2002).

The objective of this study was to provide baseline data in an area of the mathematics curriculum that is beginning to receive greater attention than previously. Four survey items were completed by 2615 students in grades 5 to 11. Two survey items asked for estimates of probability or frequency for everyday events (A), (B), and their conjunction (A and B). Two survey items asked for estimates of probability or frequency for conditional events, (X|Y) and (Y|X). Cross-sectional and longitudinal analyses revealed improvement with grade in expressing probability numerically and in distinguishing conditional events, but no change in incidence of conjunction errors. The relationships of responses to conjunction items with those to conditional items, and of both with responses to other items of basic chance measurement were considered. Implications were related to interpretation of the results in terms of previous research and suggestions for educators. (orig.)

Classification: K53

doi:10.1080/00207390110087615