

Conclusions

Based on the theory, a scale to measure students' attitudes toward mathematics was compiled consisting of 5 aspects, namely: intrinsic motivation, enjoyment, anxiety, self-confidence, and value. The results of factor analysis show that the attitude scale produces a model that fits the requirements for a unidimensional measure. The results of the analysis of item characteristics identified 65 categories of 17 items with a level of difficulty (d) at intervals of $-2.52 \leq d \leq 2.58$, and most were located at intervals of $-1 \leq d < 0$ of 43.08%. Of 227 students, there were 19 (8.37%) people who did not fit the construct of this instrument. Student attitude toward mathematics is described as student ability (θ) located at intervals of $-0.67 \leq \theta \leq 2.36$, and most student's ability is at interval $1 \leq \theta < 1.5$ (47.14%). This instrument can be used in class assessments or large-scale assessments. The results of the analysis of item characteristics can show the level of difficulty in each item of each category in detail, so the instrument can be used to measure student attitudes based on their ability level.

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