Test of Problem Solving 3: Elementary
(TOPS 3)

Publisher/Date:
• Linuisystems, Inc., 3100 4th Ave., East Moline, IL 61244-9700. Published, 2005.

Purpose:
• Individually-administered, norm-referenced cognitive-language test for children ages 6-00 through 12-11 years, addressing critical thinking abilities through integration of semantic- and linguistic-knowledge and reasoning ability.

Provides:
• A Total Score is derived based on six individual subtests (Making Inferences, Predicting, Determining Causes, Sequencing, Negative Questions, and Problem Solving).

Standardization Issues:
• Norms included 1,406 children from 46 states. The manual indicates the sample reflected census data by age, gender, race/ethnicity, and family income.

Reliability and Validity Issues:
• Internal consistency reliability was generally low, ranging from .36-.80 for the 6 task areas across age groups. Test-retest information provided (specifics about the study, time-interval between administrations) may be insufficient and coefficients obtained (based on small samples of 12-23 participants in each age group) ranged from .28 to .95, suggesting low test-retest reliability for some ages. The interrater reliability data given suggested an 88-90% agreement rate. Content validity was based on review of tests, literature, and contrasted group differences in scores. No factor-analytic studies were done to further validate the test’s structure (measuring distinct structures).

Additional Points:
• While items were purportedly selected as “culturally-fair,” some items may be experience-dependent (i.e.; questions addressing recycling, shin guards in soccer, the starting signal in a track event).
• Lack of expanded scoring criteria and samples could affect reliability in scoring, as well as the manual’s minimal guidance provision regarding response prompting.
• Little detailed information is provided in terms of the methodology in determining the scoring of “2,” “1,” and “0” for item responses, evaluating item difficulty, or item bias/fairness.

• The standardization sample included children from general- and special education, but specific numbers of each are reportedly not provided. In addition, SES breakdowns are not specified beyond “high-middle-low,” and geographic demographics (i.e.; community size, region) are not reported.

• Small mean (score) differences between some of the age groups (particularly the mean scores for ages 10, 11, and 12 on several tasks) are reported, which calls into question the adequacy of developmental progression. This becomes evident if the examiner reports by age-equivalents (which the authors appropriately caution): Age Equivalent tables may show excessive spans based on small raw score differences. For example, raw scores of 20, 21, and 22 for the Predicting task correspond to age-equivalents of 8-09, 10-02, and 12-07, respectively.

• Generally there appears to be adequate standard score range or floor and ceiling (SS’s range from <54 to 138), but the Problem Solving task may have a limited floor (lowest possible standard score=70 at age 6) and the highest possible score for 12-year olds on the Predicting task is 116.