

## Cube Root Quick Score Formula and Calculation Procedures

### Formula

Cube Root Quick Score =  $[(\text{Percent Score})^{(1/3)}] * 21.5443$ ,

Where:

- Number Correct = Raw Score
- $(\text{Raw Score}/\text{Total Test Items}) * 100 = \text{"Percent Score"}$
- " $^{(1/3)}$ " is for cube root and
- "21.5443" is a constant term to make a maximum score equals to 100. The minimum score equals 0. Thus, the range of quick scores is from 0 – 100.

*Note:* We use four decimal places for percent scores and cube root.

### Procedures

*Step 1:* Calculate Percent Scores based on Number Correct

*Step 2:* Use Percent Score with four decimal places in the above formula.

### Example 1

If raw score = 23 and the total number of test items = 50:

- then the percent score = 46.0000,
- the cube root of the percent score =  $(46.0000^{(1/3)}) = 3.5830$ , and
- the cube root quick score =  $3.5830 * 21.5443 = 77.1932 = 77$ .

### Example 2

If raw score = 23 and the total number of test items = 64:

- then the percent score = 35.9375,
- the cube root of the percent score =  $(35.9375^{(1/3)}) = 3.3000$ , and
- the cube root quick score =  $3.3000 * 21.5443 = 72.0962 = 72$ .