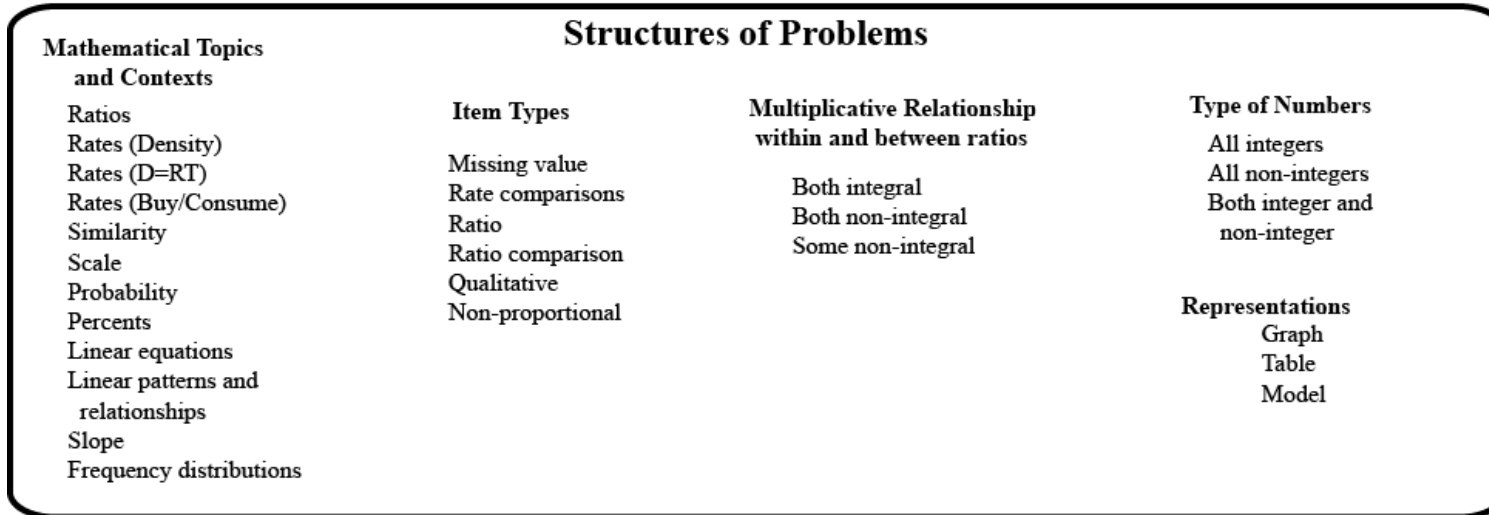


Draft OGAP Proportionality Framework (May 2008)

Students move back and forth between proportional strategies, transitional proportional strategies, and non-proportional reasoning depending upon the structure of the problem, the context in which the problem is situated, and the strength of their proportional reasoning. (Cramer, Post & Currier, 1993; Karplus, Pulos & Stage, 1983; VMP OGAP Pilots, 2006 & 2007)



Evidence in Student Work

Proportional Strategies

- Finds and applies unit rate
- Applies multiplicative relationship within or between ratios
- Sets up proportion and uses cross products

Transitional Proportional Strategies

- Builds up/down
- Finds equivalent fractions/ratios
- Sets up proportion, but doesn't apply multiplicative relationships
- Uses models

Non-proportional Reasoning

- Guesses or uses random operations
- Uses additive reasoning
- Uses whole number reasoning
- Solves a non-proportional situation proportionally
- Misinterprets vocabulary and related concept

Underlying Issues, Errors, Misconceptions

- Error in the application of cross products
- Uses additive strategy in solution
- Misinterprets meaning of quantities
- Remainders not treated correctly
- Units inconsistent or absent
- Error in equation
- Computational error
- Rounding error