SOL Alignment and Levels of Cognitive Demand
Grade 7

STANDARD 7.4

The student will solve single-step and multistep practical problems, using proportional reasoning.

- **Write proportions that represent equivalent relationships between two sets.**
- **Solve a proportion to find a missing term.**
- **Apply proportions to convert units of measurement between the U.S. Customary System and the metric system. Calculators may be used.**
- **Apply proportions to solve practical problems, including scale drawings. Scale factors shall have denominators no greater than 12 and decimals no less than tenths. Calculators may be used.**
- **Using 10% as a benchmark, mentally compute 5%, 10%, 15%, or 20% in a practical situation such as tips, tax and discounts.**
- **Solve problems involving tips, tax, and discounts. Limit problems to only one percent computation per problem.**

Problem:	Alignment to standard: Yes/no	Level of cognitive demand: Low/medium/not aligned	Answer and EKS Correlation:
1	Yes	Low	$\frac{4}{40} = \frac{x}{100}$; bullet 1
2	Yes	Low	8; bullet 2
3	Yes	Medium	5.5 miles; bullet 4
4	No		various ; aligned to SOL 7.6
5	Yes	Low	Various; bullet 5
6	No		$223.13 ; bullet 6 even though it has 2 percent computations
7	Yes	Low	4.5 cm ; bullet 4
8	Yes	Medium	15% ; bullet 6