

**SOL Alignment and Levels of Cognitive Demand  
Grade 5**

**STANDARD 5.5**

The student will

- a) find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths (divisors with only one nonzero digit); and
- b) create and solve single-step and multistep practical problems involving decimals.
- Determine an appropriate method of calculation to find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths, selecting from among paper and pencil, estimation, mental computation, and calculators.
  - Estimate to find the number that is closest to the sum, difference, and product of two numbers expressed as decimals through thousandths.
  - Find the sum, difference, and product of two numbers expressed as decimals through thousandths, using paper and pencil, estimation, mental computation, and calculators.
  - Determine the quotient, given a dividend expressed as a decimal through thousandths and a single-digit divisor. For example, 5.4 divided by 2 and 2.4 divided by 5.
  - Use estimation to check the reasonableness of a sum, difference, product, and quotient.
  - Create and solve single-step and multistep problems.
  - A multistep problem needs to incorporate two or more operational steps (operations can be the same or different).

<b>Problem:</b>	<b>Alignment to standard: Yes/no; SOL bullet</b>	<b>Level of cognitive demand: Low/medium/not aligned</b>	<b>Answer and EKS correlation:</b>
1	Yes; a	Low	15.6; aligned to 5.5a but more appropriate as a 4 <sup>th</sup> grade item.
2	Yes; a	Low	d) 1.783; aligns to bullet 3
3	No		32.13; Both numbers are not decimals.
4	Yes; b	Low	c) 0.33 meters (could be 4 <sup>th</sup> grade item); aligns bullet 6
5	Yes; a	Low	a) 0.7
6	Yes; b	Medium	b) 3.6 m <sup>2</sup> ; aligns bullet 6; however, "square meters" should be used instead of "m <sup>2</sup> ."
7	No		0.31; 2 digit divisor
8	Yes; b	Medium	c) \$48.63; aligns bullet 7