

**Content Standard A3  
Fourth Grade Level  
Estimation and Computation**

*Students understand mathematical facts, concepts, principles and theories.  
They perform basic arithmetic functions and make reasoned estimates, selecting and using appropriate methods including estimation, mental arithmetic, paper and pencil, calculator and computer.*

State Mathematics Performance Standards 3 <sup>rd</sup> -5 <sup>th</sup>	KGBSD Performance Standards	Grade Level Expectations (GLE's)
<p>M3.2.1 Describe and use a variety of estimation strategies including rounding to the appropriate place value, multiplying by powers of 10, and using front-end estimation to check the reasonableness of solutions.</p> <p>M3.2.2 Recall and use basic multiplication and division facts orally, with paper and pencil without a calculator.</p> <p>M3.2.3 Add and subtract whole numbers and fractions with common denominators to 12 and decimals, including money amounts, using models and algorithms.</p>	<p>1.1 Describe and use a variety of strategies (e.g., rounding to appropriate place value, multiplying by powers of ten, using front-end estimation) to estimate the results of whole number addition or subtraction computations to 10,000 or simple multiplication or division</p> <p>2.1 Recall and apply basic multiplication facts to 12 x 12 and division facts (as they relate to multiplication) orally, in timed tests and as missing factors</p> <p>3.1 Add and subtract common denominators to 12 using models and algorithms</p> <p>3.2 Add and subtract three-digit whole numbers with carrying and borrowing using models and algorithms</p>	<p><b><u>Estimation and Computation: Estimation</u></b> <b>The student determines reasonable answers to real-life situations, paper/pencil computations, or calculator results by</b></p> <p>[4] <b>E&amp;C-1</b> using [a variety of L] strategies (e.g., rounding to appropriate place value, multiplying by powers of ten, using front-end estimation) to estimate the results of whole number addition or subtraction computations to 10,000, or simple multiplication or division (M3.2.1)</p> <p><b><u>Estimation and Computation: Computation</u></b> <b>The student accurately solves problems (including real-world situations) involving</b></p> <p>[4] <b>E&amp;C-2</b> [recalling basic multiplication facts, products to 100, and corresponding division facts efficiently L] (M3.2.2)</p> <p>[4] <b>E&amp;C-3</b> adding or subtracting three-digit whole numbers (M3.2.3)</p> <p>[4] <b>E&amp;C-4</b> multiplying two-digit numbers by single-digit numbers (M3.2.4)</p> <p>[4] <b>E&amp;C-5</b> adding fractions with like denominators to 12 (M3.2.3)</p>

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<p>M3.2.4 Multiply and divide multi-digit whole numbers by 2-digit numbers, limiting the 2-digit divisors to those that end in 0; multiply and divide decimals that represent money by whole numbers.</p> <p>M3.2.5 Find equivalent fractions. Convert between fractions and mixed numbers.</p> <p>M3.2.6 Develop and interpret scales and scale models.</p>	<p>4.1 Multiply and divide decimals that represent money. Solve 2 and 3 digit division and multiplication problems using one digit divisors or multipliers</p> <p>5.1 Identify and use multiples, factors, and divisibility. Identify properties of 0 and 1</p> <p>6.1 Find equivalent fractions using fractions strips or other models</p> <p>6.2 Recognize fractional forms of decimals using tenths and hundredths</p> <p>7.1 Use scale models to enlarge pictures or maps</p>	