

**MATHEMATICS SKILL SEQUENCE**

***NUMBER SENSE***

<b>NUMBER SETS</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Skip count (2's, 5's, 10's)	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Rote counts to 100	I/D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Count backwards from 10	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use one-to-one correspondence to count to 31	I/D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize and name whole numbers to 31	I/D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize and name whole numbers to 100	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize, name and compare whole numbers to 1000	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize, name and compare whole numbers to 10,000	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize, name and compare whole numbers to millions	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize and name whole numbers to billions	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Reads and understands ordinal numbers 1 <sup>st</sup> – 10 <sup>th</sup>	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Reads and understands ordinal numbers to 20 <sup>th</sup>	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize, name and compare integers	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize and name rational numbers	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Recognize and name irrational numbers	-----	-----	-----	-----	-----	-----	-----	I	I/D	D/T	M&A	M&A	M&A
• Recognize and name complex numbers	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D/T	M&A
• Write whole numbers through 20	I/D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Write whole numbers through 100	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Write whole numbers through 1000	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Writes whole numbers through 10,000	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Write whole numbers through millions	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Write whole numbers through billions and beyond	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize exponents	-----	-----	-----	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A
• Write numbers in scientific notation	-----	-----	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A
<b>NUMBER THEORY</b>													
• Properties: commutative ( $4+5 = 5+4$ )	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Properties: associative (addition or multiplication) $(2+3)+5 = 2+(3+5)$	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Properties: distributive $3*(2+4) = (3*2)+(3*4)$	-----	-----	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A
• Identify factors (fact families)	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Express a number in its prime factorization form	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Identify greatest common factor (through 50)	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify greatest common factor (greater than 50)	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Identify multiples	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify least common multiple (through 24)	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify least common multiple (greater than 24)	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Identify prime and composite	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Test for divisibility (2, 3, 4, 5, 6, 9, 10)	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

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<b>NUMBER SETS</b>													
• Determine absolute value of an integer	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Determine opposite of an integer	-----	-----	-----	-----	-----	-----	I	D/T	M&A	M&A	M&A	M&A	M&A
<b>ESTIMATION</b>													
• Estimate (time, temp, length, weight, number of objects)	I	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use estimation in problem solving	-----	I	D	D	D	D	D	D	D	M&A	M&A	M&A	M&A
• Identify reasonable answers	I	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Round to the nearest 10 using 2 digit numbers	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Round to nearest hundred, using 2-3 digit numbers	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Round decimals to the nearest tenth and hundredth	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Use benchmark numbers in problem solving	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Uses benchmark fractions in problem solving	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Uses benchmark decimals in problem solving	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use scientific notation in making estimates	-----	-----	-----	-----	-----	-----	-----	-----	I	D/T	M&A	M&A	M&A
• Approximate an irrational number	-----	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A
<b>RELATIONSHIP</b>													
• Recognize equality	I	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize more (greater) than/less than (concept)	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize and use > and < (symbol)	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize and use $\geq$ , $\leq$ and $\neq$	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Recognize +, -, =	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize part and whole	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Order whole numbers	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize odd/even	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine place value 1's and 10's	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine place value 100's	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine place value 1,000's	-----	I	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine place value 1,000,000's and beyond	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Write numbers in expanded form/notation ( $24 = 20+4$ )	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Write numbers in expanded form/notation ( $243 = 200+40+3$ )	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Write numbers in expanded form/notation ( $9,473 = 9000+400+70+3$ )	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Writes numbers in expanded form ( $15901 = 10,000+5000+900+1$ )	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Read and write decimals to tenths	-----	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Read and write decimals to hundredths	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Read and write decimals to thousandths & beyond	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Compare and order decimals to the nearest tenth	-----	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Compare and order decimals to nearest hundredth	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
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***NUMBER SENSE***

<b>RELATIONSHIP (continued)</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Compare/ order decimals to nearest thousandth & beyond	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Identify equivalent decimals	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Read and write fractions 1/2, 1/3, ¼	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify a fractional part of a set or parts of a whole			I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Simplify and order fractions (to sixteenths) including mixed numbers	-----	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify equivalent fractions (to sixteenths) including mixed numbers	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Reduce fractions to lowest/simplest term	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Read and write mixed numbers	-----	-----	-----	I/D	D/T	M/A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use proper and improper fractions in problem solving	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use and determine reciprocals	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Recognize equivalence between fractions, percents and decimals with visuals using parts of a whole and parts of a set	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Relate and convert fractions to decimals	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Relate and convert decimals to percents	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Relate and convert fractions to percents	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Use & determine percents including those greater than 100 & less than 1	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Understand basic concept of ratio and proportion (scale map and proportional context)	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine distance between two points using a scale	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use ratio and proportion (rates, scale drawings & similarity) in problem solving	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Change radical numbers to their simplest form	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A
• Change complex numbers to their simplest form	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Recognize angle relationships	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
<b>COMPUTATION (without calculator)</b>													
• Combine sets	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Separate sets	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Memorize addition & subtraction facts to 12	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Can solve addition & subtraction facts to 18	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Add / subtract whole numbers without regrouping	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Add / subtract whole numbers with 1 digit regrouping	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Add / subtract whole numbers with multiple regroupings	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Add / subtract fractions with like denominators	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Add / subtract fractions with unlike denominators	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
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<b>COMPUTATION (without calculator) - continued</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Add / subtract mixed numbers	-----	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A
• Add / subtract decimals	-----	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Add / subtract integers	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Add / subtract irrational numbers	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Add / subtract complex numbers	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Add/subtract vectors	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T
• Multiply whole numbers – basic facts	-----	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Multiply whole numbers 2 digit x 1 digit	-----	-----	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Multiply whole numbers 2 digit x 2 digit	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Multiply whole numbers 3 digit x 1 digit	-----	-----	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Multiply whole numbers 3 digit x 2 digit & beyond	-----	-----	-----	-----	I	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Multiply fractions	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Multiply decimals	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Multiply integers	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Multiply irrational numbers	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Multiply complex numbers	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Determine the product of a scalar and a vector	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D
• Determine the magnitude of a vector	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D
• Determine the scalar product of two vectors	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Divide whole numbers – basic facts	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Divide whole numbers 2 digit x 1 digit (with remainder)	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Divide whole numbers 2 digit x 2 digit	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Divide whole numbers 3 digit x 1 digit	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Divide whole numbers 3 digit x 2 digit & beyond	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Divide fractions	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Divide decimals	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Divide integers	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Divide radical numbers	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	-----	D	D/T
• Divide complex numbers	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	D/T
• Write and evaluate powers (exponents – positive)	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Write and evaluate square roots	-----	-----	-----	-----	-----	-----	-----	I	D	D	D	D/T	M&A
• Write and evaluate powers (0, negatives)	-----	-----	-----	-----	-----	-----	-----	I	D	D	-----	D/T	M&A
• Multiply and divide powers with numerical bases	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
**NUMBER SENSE**

**COMPUTATION (without calculator) - continued**

<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Simplify expressions using laws of exponents with variable bases	-----	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>D</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>
• Write and evaluate fractional exponents	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Determine the value of cube roots	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>
• Determine the value of a logarithmic expression with and without a calculator	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Calculate the value of a trigonometric expression with and without a calculator	-----	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>I/D</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>
• Recognize and use the properties to simplify a numeric or algebraic expression	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>I/D</b>	<b>D</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>
• Use scientific notation in problem solving	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Apply order of operations to problems	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Use the rules of unions and intersections of sets to solve problems	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	-----	<b>D</b>	<b>D/T</b>
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
**PATTERNS and FUNCTIONS**

<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
<b>NUMBER</b>													
• Recognize and describe patterns (number)	<b>I/D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Extend and create patterns (additions and subtraction)	<b>I/D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Predict using a pattern (addition and subtraction)	<b>I</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Describe a rule that explains a functional relationship and/or pattern using addition, subtraction or multiplication rules or regressions (function boxes)	-----	-----	-----	<b>I/D</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Express sequences algebraically	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Identify arithmetic and geometric sequence	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----	<b>D/T</b>	<b>M&amp;A</b>
• Given an arithmetic or geometric sequence, find the nth term of the sequence	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Write and use formula to find the nth term of a sequence	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----	<b>D/T</b>	<b>M&amp;A</b>
• Given a series, find the sum to the nth term in a series	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----
• Find the sum of an infinite series	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----
• Calculate the limit of a sequence	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	-----
• Identify convergent and divergent sequences	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
***PATTERNS and FUNCTIONS***

<b>RELATIONSHIP</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Identify different expressions for the same quantities $5+0 = 4+1 = 3+2 = .5..$	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify inverses & identities for addition & multiplication	-----	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A
• Recognize & use commutative, associative & distributive properties of addition & multiplication (numbers & variables)	-----	-----	-----	-----	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A
• Recognize & use transitive property	-----	-----	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A
• Add and subtract to simplify polynomial expressions	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Multiply and divide to simplify polynomial expressions	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Expand polynomials	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Recognize special products and factoring	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Multiply and divide complex expressions	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Recognize and use functions	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Write linear equations and inequalities	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Use variables to represent missing values	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Evaluate variable expressions through numerical substitutions	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Solve one step linear equations and inequalities	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Solve two step linear equations and inequalities	-----	-----	-----	-----	-----	-----	-----	I	D/T	M&A	M&A	M&A	M&A
• Solve multiple step linear equations and inequalities	-----	-----	-----	-----	-----	-----	-----	-----	I	D/T	M&A	M&A	M&A
• Solve equations involving radicals	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D	D/T	M&A
• Solve for a variable in a formula with 1 step	-----	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A
• Solve equations with variables on both sides	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A
• Solve for a variable in a formula with more than 1 step	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A
• Solve quadratic or second degree equations by factoring, quadratic formula and graphing	-----	-----	-----	-----	-----	-----	-----	-----	I	I/D	-----	D/T	M&A
• Apply completing the square to solve a quadratic equation	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Model data using polynomial functions	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	-----	D	D
• Multiply and divide polynomial equations	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	-----	D	D
• Solve polynomial equations by factoring and rational /irrational/imaginary root theorem	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D
• Use a graphing calculator to solve polynomial functions	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Expand polynomial functions using the binomial theorem	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----
• Apply and solve a system of linear equations by elimination, graphing, and substitution methods	-----	-----	-----	-----	-----	-----	-----	-----	I	I/D	-----	D/T	M&A
• Add and subtract matrices	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D	D/T	M&A
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
***PATTERNS and FUNCTIONS***

<b>RELATIONSHIP (continued)</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Multiply matrices	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D	D/T
• Use graphing calculator to perform operations with matrices	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D	D/T
• Find the determinant and inverse of matrices (including using graphing calculator)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	D
• Solve problems by writing and graphing systems of inequalities	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Solve absolute value equations and inequalities	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Use graphing calculators to solve systems of equations	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Name ordered paired values that are solutions to a linear equation and plot those values	-----	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A
• Identify domain and range	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Determine the slope of a line (from graph)	-----	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A
• Determine the slope and intercepts of a line through a pair of given points	-----	-----	-----	-----	-----	-----	-----	-----	I	I/D	D/T	M&A	M&A
• Recognize slope and y-intercept from a graph	-----	-----	-----	-----	-----	-----	-----	-----	I	I/D	D/T	M&A	M&A
• Write the equation of a line given its graph	-----	-----	-----	-----	-----	-----	-----	-----	I	I/D	D/T	M&A	M&A
• Recognize slope & y-intercept from a given linear equation	-----	-----	-----	-----	-----	-----	-----	-----	I	I/D	D/T	M&A	M&A
• Recognize & describe exponential growth & decay	-----	-----	-----	-----	-----	-----	-----	-----	I	I/D	-----	D/T	M&A
• Identify direct and indirect variations	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Create a graph to describe data - (picture / bar)	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Make conjectures about parent functions of lines (confirm using graphing calculator)	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Make conjectures about parent functions of parabolas (confirm using graphing calculator)	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Make conjectures about parent functions of cubic functions (confirm using graphing calculator)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Make conjectures about parent functions of absolute value functions (confirm using graphing calculator)	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	-----	D/T	M&A
• Make conjectures about parent functions of radical functions (confirm using graphing calculator)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Make conjectures about parent functions of exponential functions (confirm using graphing calculator)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Make conjectures about parent functions of logarithmic functions (confirm using graphing calculator)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Graph the line representing the solution of a linear equation	-----	-----	-----	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
***PATTERNS and FUNCTIONS***

<b>RELATIONSHIP (continued)</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Graph an inequality	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>I/D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Model data using quadratic functions (quadratic regression)	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	-----	<b>D/T</b>	<b>M&amp;A</b>
• Recognize factoring patterns of first and second degree polynomials	-----	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>D</b>	-----	<b>D/T</b>	<b>M&amp;A</b>
• Recognize if a relation is a function	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----	<b>D/T</b>	<b>M&amp;A</b>
• Add and subtract functions	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Determine and evaluate composite functions	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Identify and recognize linear and non linear relationships expressed in tables and graphs	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>I/D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Simplify rational expressions	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D</b>	<b>D</b>	<b>D/T</b>
• Solve rational equations										<b>I/D</b>	<b>D</b>	<b>D</b>	<b>D/T</b>
• Determine the shape, position, and line of symmetry of a quadratic function	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----	<b>D/T</b>	<b>M&amp;A</b>
• Recognize the pattern between a function and its translation	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Determine and graph the inverse of a function	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Graph and describe the attributes of circular functions (sine, cosine, tangent, cosecant, secant, cotangent)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Graph circles	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D</b>	<b>D/T</b>
• Graph parabolas (with and without a calculator)	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----	<b>D/T</b>	<b>M&amp;A</b>
• Graph other conics (ellipse, hyperbola)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Write the equation of a conic section when given facts about its intercepts, center, axis, lengths, or tangent line	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Graph a polar equation of the form $r=f(\phi)$	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>
• Simplify and solve logarithmic equations	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D/T</b>	<b>M&amp;A</b>
• Use graphing calculators to model and solve trigonometric and transcendental functions	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Solve trigonometric identities to prove identities	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D</b>
• Determine the vector equation of a line	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>
• Find the angle between two lines, knowing their equation	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>
• Use dimensional analysis to find rates conversion factors	-----	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
<b>LOGIC</b>													
• Create generalizations	-----	-----	-----	<b>I</b>	<b>D</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Use logical reasoning (inductive & deductive)	-----	-----	-----	-----	-----	<b>I</b>	<b>D</b>	<b>D</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Recognize conditionals, biconditionals and good definitions	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----	<b>D/T</b>
• Recognize inductive and deductive reasoning	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I</b>	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Write and verify proofs	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>



**MATHEMATICS SKILL SEQUENCE**  
***GEOMETRY***

<b>GEOMETRY</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Recognize shape attributes	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize and name: circle, square, triangle, rectangle, oval	I/D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify and use properties of triangles (altitude, median, midline, etc)	-----	-----	-----	-----	-----	-----	-----	-----	I	-----	I/D/T	M&A	M&A
• Identify and use properties of quadrilaterals (diagonals, opposite sides, etc)	-----	-----	-----	-----	-----	-----	-----	-----	I	-----	I/D/T	M&A	M&A
• Identify and name regular polygons with 3, 4, 5, 6 or 8 sides	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Find the area of regular polygons	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T
• Recognize and name: special quadrilaterals and other polygons	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Identify and label points, lines, and line segments	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify and label rays and angles	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify parallel, intersecting & perpendicular lines	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify, figure, draw and construct parallel, intersecting and perpendicular lines	-----	-----	-----	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A
• Prove lines are parallel	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D/T	M&A	M&A
• Using postulates, theorems and definitions, find measurements of segments and angles	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	D/T	M&A	M&A
• Classify three-dimensional shapes (spheres, cones, cubes, cylinders)	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Classify three-dimensional shapes (pyramids, prisms)	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify parts of 2-D and 3-D shapes (vertices, edges, right angle, face, base, altitude & slant height)	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify and describe shapes from simple nets / flat patterns (cubes, rectangular and triangular prisms, rectangular and triangular pyramids)	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify, describe and compare shapes from nets /flat patterns (cubes, rectangular and triangular prisms, rectangular and triangular pyramids)	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify & use relationships among parts of complex 2D & 3D figures (e.g. – parallel sides, congruent faces)	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Construct perpendicular bisector of a chord	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D	-----	-----
• Identify right angles	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Classify triangles according to sides and/or angles	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Use the Pythagorean theorem to find the length of any side in a right triangle	-----	-----	-----	-----	-----	-----	-----	I/D	D	D	D/T	M&A	M&A
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
***GEOMETRY***

<b>GEOMETRY (continued)</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Classify quadrilaterals according to sides and/or angles	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Develop spatial sense: position	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Develop spatial sense (flip, turn, slide)	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Develop spatial sense: 2-D, 3-D (incl. draw / construct models)	-----	-----	-----	I/D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Analyze transformations and relate properties to similarity and congruence (translation, rotation, reflection, dilation)	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Construct and alter figures using transformational geometry	-----	-----	-----	-----	-----	-----	-----	-----	I	-----	I/D	D/T	M&A
• Resolve vectors and find resultant vector using parallelogram of forces	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D
• Identify symmetrical shapes	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify congruent shapes	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize types of congruencies in proving triangles congruent	-----	-----	-----	-----	-----	-----	-----	-----	I	-----	D/T	M&A	M&A
• Use triangle congruencies (CPCTC)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	-----
• Identify locations using coordinates (2,3)	-----	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use coordinate geometry to model and solve real world problems	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A
• Locate and plot objects using the rectangular coordinate system (one quadrant grids using numbers only)	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify the fourth coordinate pair when given three vertices of a quadrilateral on a coordinate grid (including negative coordinates)	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Locate an ordered triple in space coordinates	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Locate a point expressed in polar form in the polar coordinate system	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D
• Convert a point expressed in rectangular coordinates into its polar equivalent	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D
• Transform equations from polar into Cartesian	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D
• Determine if two vectors are parallel or perpendicular	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D
• Compute the distance and midpoint of a segment with the appropriate formula	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	D/T	M&A	M&A
• Find the directed distance between a point and a line	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D
• Identify similar shapes	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Use ratio and proportion to determine the unknown sides of similar triangles	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Find and use relationships in similar right triangles	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	-----
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

MATHEMATICS SKILL SEQUENCE

**GEOMETRY**

<b>GEOMETRY (continued)</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Use and apply AA ~, SAS ~, SSS ~ when dealing with similar triangles	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	-----
• Find perimeters and areas of similar figures	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	-----
• Use special right triangle relationships to find sides in a right triangle	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A
• Use the basic trigonometric ratios of sine, cosine, and tangent to solve for sides and angles in a right triangle	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D	D/T	M&A	M&A
• Calculate trig ratio in radian measure	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Use law of cosines and law of sines to solve triangles	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T
• Identify and use properties of subsets of polygons	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Compute the lengths of chords and tangents	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	-----
• Compute the length of secants	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	-----
• Use trigonometric ratios to model and solve real world problems	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D	D	D/T

MATHEMATICS SKILL SEQUENCE

**PROBABILITY / STATISTICS**

<b>CHANCE</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Recognize outcomes	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify possible outcomes	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine the number of combinations of three items (tree diagrams)	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use tree diagrams, tables, and systematic listing to count outcomes, choices, and possibilities	-----	-----	-----	-----	I	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A
• Use the counting principle to find the number of different arrangements of a group of terms	-----	-----	-----	-----	-----	-----	-----	-----	I	D	-----	D/T	M&A
• Recognize and calculate permutation and combination situations	-----	-----	-----	-----	-----	-----	-----	-----	I	D	-----	D/T	M&A
• Predict theoretical probability	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Recognize dependent / independent events	-----	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A
• Use lengths and areas to determine theoretical geometric probabilities	-----	-----	-----	-----	-----	-----	I	D	D	-----	D/T	M&A	M&A
• Relate/compare experimental probability	-----	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A
• Relate/compare theoretical probabilities	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Develop simulations to predict an event	-----	-----	-----	-----	-----	-----	-----	I	D	D	-----	-----	-----
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
***PROBABILITY / STATISTICS***

**NUMERICAL REPRESENTATION**

<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Express probability as a ratio, percent, fraction and words	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Express probability as decimals and/or percents	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A

**DATA COLLECTION**

• Use attributes to collect data	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use various methods to collect data	I	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Design various methods to gather data	-----	-----	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A
• Recognize and use representative samples	-----	-----	-----	-----	-----	-----	-----	I	D	D	-----	-----	-----
• Collect a random sample from a population	-----	-----	-----	-----	-----	-----	-----	I	I/D	D	-----	-----	-----
• Differentiate and select methods of data collection according to efficiency	-----	-----	-----	-----	-----	-----	-----	-----	I	D	-----	-----	-----
• Differentiate and select methods of data collection according to validity	-----	-----	-----	-----	-----	-----	-----	-----	I	D	-----	-----	-----
• Use models/simulations to generate data	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A

**DATA ORGANIZATION**

• Use real objects or pictures to organize data	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Classify data to create meaning	I	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Utilize tallies, tables, and charts to organize and display data, using technology as appropriate	I	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Utilize graphs or diagrams to display data, utilizing technology as appropriate (single bar graphs, circle graphs, tables, charts)	I	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Utilize graphs or diagrams to display data, utilizing technology as appropriate (line plots and Venn Diagrams)	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use matrices and grids to display and interpret data	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A
• Select an appropriate method of displaying data (line, stem & leaf, box & whiskers)	-----	-----	-----	-----	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A
• Scatterplot a data set in two variables and estimate a line to fit the data	-----	-----	-----	-----	-----	-----	I	I/D	D	D/T	M&A	M&A	M&A

**DATA INTERPRETATION**

• Describe and compare collected data	I	D	D	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Analyze data to derive meaning	I	D	D	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize that data can be manipulated	-----	-----	-----	-----	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A
• Determine central tendency (mean, median, mode and range) in basic problems	-----	-----	-----	I	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A

<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
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**MATHEMATICS SKILL SEQUENCE**  
***PROBABILITY / STATISTICS***

<b>DATA INTERPRETATION</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Determine measures of central tendency (mean, median, mode and range) in complex problems	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A
• Use measures of central tendencies to model and solve real world problems	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Determine measures of variation (range, outliers of a data set) using technology as appropriate	-----	-----	-----	-----	-----	-----	I	I/D	D	D	-----	D/T	M&A
• Determine standard deviation of a data set using technology as appropriate	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----
• Use linear model to represent data	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
• Use graphing calculator to determine equation of best-fit line	-----	-----	-----	-----	-----	-----	-----	-----	-----	I	-----	D/T	M&A
• Make predictions based on analysis	-----	-----	-----	-----	I	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A
• Examine basic credibility of data	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Determine credibility of data using a variety of strategies	-----	-----	-----	-----	-----	-----	-----	-----	I	D	-----	-----	-----
• Based on data analysis, draw conclusions & develop convincing arguments	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Differentiate between skewed and normal distribution	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
***MEASUREMENT***

<b>SYSTEMS</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Recognize non-standard units of measurement	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize customary units of measurement (length, capacity, weight)	-----	I	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize metric units of measurement	-----	-----	I	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Converts units within a system (inches to feet, quarts to cups, mm to cm)	-----	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
<b>ESTIMATION</b>													
• Make reasonable estimates of measurement	I	D	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Estimate distances from a map (using a scale)	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
<b>TYPES</b>													
• Use non-standard units to make linear measurements	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use non-standard units to measure weight	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use non-standard units to determine/measure volume	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
**MEASUREMENT**

**TYPES (continued)**

<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Use customary units to make linear measurements Gr 1: inch, Gr 2: ½ inch, Gr 3: ¼, Gr 4: 1/8, Gr 5: 1/16	-----	I/D	D/T	D/T	D/T	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine the circumference of a circle	-----	-----	-----	-----	-----	I	I/D	D	D/T	M&A	M&A	M&A	M&A
• Determine the arc length of a circle	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D	D/T
• Recognize and determine the measure of a central angle	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D	D/T
• Recognize and determine the measure of angles formed by chords, secants and tangents	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	-----
• Identify and calculate radius and diameter	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Use customary units to measure weight (ounces and pounds)	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use customary units to measure/determine capacity / volume (cups, pints, quarts, gallons)	-----	I/D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use customary and metric units to determine perimeter	-----	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use formula to find perimeter of common & complex figures	-----	-----	-----	-----	I	I/D	D	D	D/T	M&A	M&A	M&A	M&A
• Determine area (square, rectangle and right triangle) – metric & customary	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine area of circle, triangle, parallelograms & trapezoids	-----	-----	-----	-----	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A
• Determine area of an irregular figure	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
• Use metric units to make linear measurements (mm, cm, m)	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use metric units to measure weight (grams & kilograms)	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Use metric units to measure capacity / volume (liter)	-----	-----	I	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Measure / determine volume of rectangular prisms (liters)	-----	-----	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A
• Measure temperature (Celsius & Fahrenheit)	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine surface area and volume of prisms	-----	-----	-----	-----	-----	-----	-----	I/D	D	-----	D/T	M&A	M&A
• Measure / determine volume of other 3-D figures (cylinders, cones, pyramids and spheres)	-----	-----	-----	-----	-----	-----	-----	I	I/D	-----	D/T	M&A	M&A
• Measure / determine surface area of other 3-D figures (cylinders, cones, pyramids and spheres)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	-----
• Convert customary to metric measurement (and metric to customary)	-----	-----	-----	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A
• Use indirect measurement	-----	-----	-----	-----	-----	-----	-----	-----	I/D	D	D/T	M&A	M&A
• Determine angle measures using angle relationships	-----	-----	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**

***MEASUREMENT***

<b>MONEY</b>													
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
• Recognize, sort, and describe coins by appearance	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize, sort, and describe coins by value	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Compare coins by value	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Select a variety of coins to represent a given amount	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine the value of a group of coins	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize bills	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Make change using coins	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Make change using bills and coins (3 <sup>rd</sup> - up to \$10.00, 4 <sup>th</sup> up to \$20.00, 5 <sup>th</sup> up to \$100.00)	-----	-----	-----	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Counts back change orally	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Recognize the relationship of money to decimal system	-----	-----	I	I/D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Calculate percent of change (sales tax, discounts, mark-up)	-----	-----	-----	-----	-----	I	I/D	D	D/T	M&A	M&A	M&A	M&A
• Calculate simple and compound interest	-----	-----	-----	-----	-----	-----	-----	-----	-----	I/D	-----	D/T	M&A
<b>TIME</b>													
• Sequence events according to time	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify parts of a calendar	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Sequence days, weeks, months, years	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Identify parts of a clock (hour and minute hand)	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Tell time using a clock; 1 hour, ½ and ¼ hour intervals	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Tell time using a clock; 5 minute intervals	-----	I	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Tell time using a clock; 1 minute intervals	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Estimate and compare varying lengths of time	I	D	T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine elapsed time using a calendar in problem solving situations	I	D	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Determine elapsed time using a clock in problem solving situations	-----	-----	I	D	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
<b>ANGLES</b>													
• Recognize angles (right angles)	-----	-----	-----	I/D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Classify angles	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A	M&A
• Measure angles to nearest degree	-----	-----	-----	-----	I	D	D/T	M&A	M&A	M&A	M&A	M&A	M&A
• Classify angle pairs	-----	-----	-----	-----	-----	I	I/D	D	D/T	M&A	M&A	M&A	M&A
<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>

**MATHEMATICS SKILL SEQUENCE**  
***MEASUREMENT***

**ANGLES (continued)**

• Determine the measure of the interior angles of polygons	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	-----	<b>D/T</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
• Measure angles using radians	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Convert between degree and radian measure	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>
• Calculate area of sector of circle	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D</b>	<b>D/T</b>
• Identify customary value and co-ordinates of the unit circle in both degrees and radians	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	<b>I/D</b>	<b>D/T</b>

**MATHEMATICS SKILL SEQUENCE**  
***Problem Solving***

**PROBLEM SOLVING**

<b>MATHEMATICAL SKILL</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>ALG</b>	<b>GEO</b>	<b>ALG 2</b>	<b>PRE - C</b>
▪ Utilize problem solving strategies	<b>I</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>
▪ Utilizes mental math	<b>I</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>	<b>M&amp;A</b>



# MATHEMATICS SKILL SEQUENCE

## INSTRUCTIONAL DEFINITIONS

### Introduce (I)

#### Instructional Expectation

- Use vocabulary
- Define vocabulary
- Treat as a new concept

#### Accountability

- Exposure & Exploration

### Develop (D)

#### Instructional Expectation

- Refine and extend
- Extend skills and concepts
- Treat as a previously-introduced concept or skill

#### Accountability

- Direct Instruction
- Class Activities
- Student Assignments
- Progress Testing to Determine Student's Abilities and Needs

### Test (T)

#### Instructional Implication

- Concept has been taught (in most cases) at least two years
- Concept will be assessed on a district assessment for that grade level
- This concept will be NO LONGER taught via direct instruction

#### Accountability

- If student has not mastered the concept, he or she needs help in an alternative format (to be determined at building level). Although the concept will be maintained through review, the concept will no longer be directly taught as an instructional objective.

### Maintain and Apply (M&A)

#### Instructional Implication

- Treat as previously-developed concept or skill
- Use concept or skill in problem solving
- Use vocabulary when teaching new concepts