

Fourth Grade Math

Grade	Standard	Benchmark	Know/Appli	Indicator	Sub-Ind.	Assessed	Non-Calc	Fin. Lit.	(Non-Assessed Indicators)	Date		% Prof(+)		Comments
									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	1	1	K	1	a				Knows, explains, and uses equivalent representations for: whole numbers from 0 through 100,000 (2.4.K1a-b);					
4	1	1	K	1	b			\$	Knows, explains, and uses equivalent representations for: fractions greater than or equal to zero (halves, fourths, thirds, eighths, tenths, twelfths, sixteenths, hundredths) including mixed numbers (2.4.K1c);					
4	1	1	K	1	c				Knows, explains, and uses equivalent representations for: decimals greater than or equal to zero through hundredths place and when used as monetary amounts (2.4.K1c-d), e.g., $7\text{¢} = \$0.07 = 7/100$ of a dollar or a hundreds grid with 7 sections colored or $.1 = 1/10 = \text{cccccccg}$ .					
4	1	1	K	2	a			\$	Compares and orders: whole numbers from 0 through 100,000 (2.4.K1a-b);					
4	1	1	K	2	b				Compares and orders: fractions greater than or equal to zero (halves, fourths, thirds, eighths, tenths, twelfths, sixteenths, hundredths) including mixed numbers with a special emphasis on concrete objects (2.4.K1c);					
4	1	1	K	2	c			\$	Compares and orders: decimals greater than or equal to zero through hundredths place and when used as monetary amounts (2.4.K1c-d).					
4	1	1	A	1	a				Solves real-world problems using equivalent representations and concrete objects to:					
4	1	1	A	1	b				Solves real-world problems using equivalent representations and concrete objects to: compare and order whole numbers from 0 through 100,000 (2.4.A1a-b); e.g., using base ten blocks, represent the attendance at the circus over a three day stay; then represent the numbers using digits and compare and order in different ways;					

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4	1	1	A	1	c				Solves real-world problems using equivalent representations and concrete objects to: multiply a one-digit whole number by a two-digit whole number (2.4.A1a-b), e.g., use base ten blocks to represent $24 \times 5$ to find the total number of hours in 5 days, or use repeated addition $24 + 24 + 24 + 25$ to solve, or use the algorithm.					
4	1	1	A	2				§	Determines whether or not solutions to real-world problems that involve the following are reasonable:					
4	1	1	A	2	a				Determines whether or not solutions to real-world problems that involve the following are reasonable: whole numbers from 0 through 10,000 (2.4.A1a-b), e.g., a student says that there are 1,000 students in grade 4 at her school, is this reasonable?					
4	1	1	A	2	b				Determines whether or not solutions to real-world problems that involve the following are reasonable: fractions greater than or equal to zero (halves, fourths, thirds, eighths, tenths, sixteenths) (2.4.A1c), e.g., you ate $\frac{1}{2}$ of a sandwich and a friend ate $\frac{3}{4}$ of the same sandwich; is this reasonable?					
4	1	1	A	2	c				Determines whether or not solutions to real-world problems that involve the following are reasonable: decimals greater than or equal to zero when used as monetary amounts (2.4.A1c-d), e.g., a pack of chewing gum costs what amount - \$62 \$.75 9¢ 75.00 750¢? Is this reasonable?					
4	1	2	K	1		▲		§	Identifies, models, reads, and writes numbers using numerals, words, and expanded notation from hundredths place through one-hundred thousands place (2.4.K1a-b), e.g., four hundred sixty-two thousand, two hundred eighty-four and fifty hundredths = 462,284.50 or $462,284.50 = (4 \times 100,000) + (6 \times 10,000) + (2 \times 1,000) + (2 \times 100) + (8 \times 10) + (4 \times 1) + (5 \times .1) + (0 \times .01) = 400,000 + 60,000 + 2,000 + 200 + 80 + 4 + .5 + .00$ .					
4	1	2	K	2					Classifies various subsets of numbers as whole numbers, fractions (including mixed numbers), or decimals (2.4.K1b-c, 2.4.K1i).					
4	1	2	K	3				§	Identifies the place value of various digits from hundredths place through one hundred thousands place (2.4.K1b).					

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4	1	2	K	4					Identifies any whole number as even or odd (2.4.K1a).					
4	1	2	K	5	a	▲			Uses the concepts of these properties with the whole number system and demonstrates their meaning including the use of concrete objects (2.4.K1a): commutative properties of addition and multiplication, e.g., $12 + 18 = 18 + 12$ and $8 \times 9 = 9 \times 8$ ;					
4	1	2	K	5	b	▲			Uses the concepts of these properties with the whole number system and demonstrates their meaning including the use of concrete objects (2.4.K1a): zero property of addition (additive identity) and property of one for multiplication (multiplicative identity), e.g., $24 + 0 = 24$ and $75 \times 1 = 75$ ;					
4	1	2	K	5	c	▲			Uses the concepts of these properties with the whole number system and demonstrates their meaning including the use of concrete objects (2.4.K1a): associative properties of addition and multiplication, e.g., $4 + (2 + 3) = (4 + 2) + 3$ and $2 \times (3 \times 4) = (2 \times 3) \times 4$ ;					
4	1	2	K	5	d	▲			Uses the concepts of these properties with the whole number system and demonstrates their meaning including the use of concrete objects (2.4.K1a): symmetric property of equality applied to addition and multiplication, e.g., $100 = 20 + 80$ is the same as $20 + 80 = 100$ and $21 = 7 \times 3$ is the same as $3 \times 7 = 21$ ;					
4	1	2	K	5	e				Uses the concepts of these properties with the whole number system and demonstrates their meaning including the use of concrete objects (2.4.K1a): zero property of multiplication, e.g., $9 \times 0 = 0$ or $0 \times 112 = 0$ ;					
4	1	2	K	5	f				Uses the concepts of these properties with the whole number system and demonstrates their meaning including the use of concrete objects (2.4.K1a): distributive property, e.g., $6(7 + 3) = (6 \cdot 7) + (6 \cdot 3)$ .					

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4	1	2	A	1	a				Solves real-world problems with whole numbers from 0 through 10,000 using place value models; money; and the concepts of these properties to explain reasoning (2.4.A1a-b,d): commutative properties of addition and multiplication, e.g., a student has a \$5, a \$10, and a \$20 bill; a student totals the amount to see how much can be spent shopping for school supplies. The student says: Because you can add in any order, I can rearrange the money and count \$20, \$10, and \$5 for $\$20 + \$10 + \$5$ . Another student has 4 \$5 bills. The student is asked the amount. The student says: I don't know $4 \times 5$ but I know $5 \times 4$ is \$20, since multiplication can be done in any order.					
4	1	2	A	1	b				Solves real-world problems with whole numbers from 0 through 10,000 using place value models; money; and the concepts of these properties to explain reasoning (2.4.A1a-b,d): zero property of addition, e.g., a student has 6 marbles in one pocket and none in the other pocket. How many marbles altogether?					
4	1	2	A	1	c				Solves real-world problems with whole numbers from 0 through 10,000 using place value models; money; and the concepts of these properties to explain reasoning (2.4.A1a-b,d): property of one for multiplication, e.g., there are 24 students in our class, each student should have one math book; so I compute $24 \times 1 = 24$ . Multiplying times 1 does not change the product because it is one group of 24.					
4	1	2	A	1	d				Solves real-world problems with whole numbers from 0 through 10,000 using place value models; money; and the concepts of these properties to explain reasoning (2.4.A1a-b,d): associative properties of addition and multiplication, e.g., a student has two dimes and a quarter. Using coins or money models, there are at least 2 ways to group the coins to find the total. One way is $10\text{¢ (dime)} + 10\text{¢ (dime)} = 20\text{¢}$ , then add the quarter, so $20\text{¢} + 25\text{¢ (quarter)} = 45\text{¢}$ . Another way $10\text{¢ (dime)} + 25\text{¢ (quarter)} = 35\text{¢}$ , then add the other dime to $35\text{¢}$ so $35\text{¢} + 10\text{¢} = 45\text{¢}$ . This models that $(D + D) + Q = D + (D + Q)$ .					

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4	1	2	A	1	e				Solves real-world problems with whole numbers from 0 through 10,000 using place value models; money; and the concepts of these properties to explain reasoning (2.4.A1a-b,d): zero property of multiplication, e.g., in science, you are observing a snail. The snail does not move over a 4-hour period. To figure its total movement, you say $4 \times 0 = 0$ .					
4	1	2	A	2	a				Performs various computational procedures with whole numbers from 0 through 10,000 using the concepts of the following properties; extends the properties to fractions (halves, fourths, thirds, eighths, tenths, sixteenths) including mixed numbers, and decimals through hundredths place; and explains how the properties were used (2.4.A1a-c): commutative property of addition and multiplication, e.g., $5 + 6 = 6 + 5$ , the student says: I know that $5 + 6 = 11$ and adding in any order still gets the answer, so $6 + 5$ is the same as $5 + 6$ . $4 \times 6 = 6 \times 4$ , the student says: I know that $4 \times 6 = 24$ and multiplying in any order still gets the answer, so $4 \times 6$ is the same as $6 \times 4$ .					
4	1	2	A	2	b				Performs various computational procedures with whole numbers from 0 through 10,000 using the concepts of the following properties; extends the properties to fractions (halves, fourths, thirds, eighths, tenths, sixteenths) including mixed numbers, and decimals through hundredths place; and explains how the properties were used (2.4.A1a-c): zero property of multiplication without computing, e.g., $158 \times 0 = 0$ ; the student says: I know the answer (product) is zero because no matter how many factors you have, when you multiply with a 0, the product is zero.					

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4	1	2	A	2	c				Performs various computational procedures with whole numbers from 0 through 10,000 using the concepts of the following properties; extends the properties to fractions (halves, fourths, thirds, eighths, tenths, sixteenths) including mixed numbers, and decimals through hundredths place; and explains how the properties were used (2.4.A1a-c): associative property of addition, e.g., $9 + 8$ could be solved as $1 + (8 + 8)$ or $(1 + 8) + 8$ , the student says: I don't know $9 + 8$ , but I know my doubles of $8 + 8$ , so I made the 9 into $1 + 8$ and then added 1 more to make 17.					
4	1	2	A	3					States the reason for using whole numbers, fractions, mixed numbers, or decimals when solving a given real-world problem (2.4.A1a-d).					
4	1	3	K	1				\$	Estimates whole number quantities from 0 through 10,000; fractions (halves, fourths, thirds); and monetary amounts through \$1,000 using various computational methods including mental math, paper and pencil, concrete materials, and appropriate technology (2.4.K1a-d).					
4	1	3	K	2				\$	Uses various estimation strategies and explains how they are used when estimating whole numbers quantities from 0 through 10,000; fractions [(halves, fourths, thirds) including mixed numbers]; and monetary amounts through \$1,000 (2.4.K1a-d).					
4	1	3	K	3					Recognizes and explains the difference between an exact and an approximate answer (2.4.K1a), e.g., when asked how many desks are in the room, the student gives an estimate of about 30 and then counts the desks and indicates an exact answer is 28 desks.					
4	1	3	K	4					Selects from an appropriate range of estimation strategies and determines if the estimate is an overestimate or underestimate, (2.4.K1a).					
4	1	3	A	1				\$	Adjusts original whole number estimates of a real-world problem using numbers from 0 through 10,000 based on additional information (a frame of reference) (2.4.A1a), e.g., if given a small jar and told the number of pieces of candy it has in it, the student would adjust his/her original estimate of the number of pieces of candy in a larger jar.					

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4	1	3	A	2				\$	Estimates to check whether or not the result of a real-world problem using whole numbers from 0 through 10,000, fractions (including mixed numbers), and monetary amounts is reasonable and makes predictions based on the information (2.4.A1a-d), e.g., at the movies, you bought popcorn for \$2.35, a soda for \$2.50, and paid \$4.50 for the ticket. Is it reasonable to say you spent \$10? How much will you need to save to go to the movies once a week for the next month?					
4	1	3	A	3					Selects a reasonable magnitude from three given quantities based on a familiar problem situation and explains the reasonableness of selection (2.4.A1a), e.g., about how many new pencils will fit in your pencil box? Is it about 25, about 50, or about 100? The answer will depend on the size of your pencil box.					
4	1	3	A	4				\$	Determines if a real-world problem calls for an exact or approximate answer and performs the appropriate computation using various computational methods including mental math, paper and pencil, concrete objects, and appropriate technology (2.4.A1a).					
4	1	4	K	1				\$	Computes with efficiency and accuracy using various computational methods including mental math, paper and pencil, concrete materials, and appropriate technology (2.4.K1a).					
4	1	4	K	2			N	\$	States and uses with efficiency and accuracy multiplication facts from 1 x 1 through 12 x 12 and corresponding division facts (2.4.K1a).					
4	1	4	K	3	a		N	\$	Performs and explains these computational procedures: adds and subtracts whole numbers from 0 through 100,000 and when used as monetary amounts (2.4.K1a-b,d);					
4	1	4	K	3	b		N	\$	Performs and explains these computational procedures: multiplies through a three-digit whole number by a two-digit whole number (2.4.K1a-b);					
4	1	4	K	3	c		N	\$	Performs and explains these computational procedures: multiplies whole dollar monetary amounts (through three-digits) by a one- or two-digit whole number (2.4.K1d), e.g., \$45 x 16;					

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4	1	4	K	3	d		N	\$	Performs and explains these computational procedures: multiplies monetary amounts less than \$100.00 by whole numbers less than ten (2.4.K1d), e.g., \$14.12 x 7;					
4	1	4	K	3	e		N	\$	Performs and explains these computational procedures: divides through a two-digit whole number by a one-digit whole number with a one-digit whole number quotient with or without a remainder (2.4.K1a-b), e.g., $47 \div 5 = 9 \text{ r } 2$ ;					
4	1	4	K	3	f		N	\$	Performs and explains these computational procedures: adds and subtracts fractions greater than or equal to zero with like denominators (2.4.K1c);					
4	1	4	K	3	g		N	\$	Performs and explains these computational procedures: figures correct change through \$20.00 (2.4.K1d).					
4	1	4	K	4					Identifies multiplication and division fact families (2.4.K1a).					
4	1	4	K	5					Reads and writes horizontally, vertically, and with different operational symbols the same addition, subtraction, multiplication, or division expression, e.g., $6 \bullet 4$ is the same as $6 \times 4$ is the same as 4 and 6(4) or 10 divided by 2 is the same as $10 \div 2$ or $\frac{10}{2}$ . $\quad \quad \quad \times 6$					
4	1	4	K	6		▲	N	\$	Shows the relationship between these operations with the basic fact families (addition facts with sums from 0 through 20 and corresponding subtraction facts, multiplication facts from $1 \times 1$ through $12 \times 12$ and corresponding division facts) including the use of mathematical models (2.4.K1a):					
4	1	4	K	6	a	▲	N	\$	Shows the relationship between these operations with the basic fact families (addition facts with sums from 0 through 20 and corresponding subtraction facts, multiplication facts from $1 \times 1$ through $12 \times 12$ and corresponding division facts) including the use of mathematical models (2.4.K1a): addition and subtraction,					
4	1	4	K	6	b	▲	N	\$	Shows the relationship between these operations with the basic fact families (addition facts with sums from 0 through 20 and corresponding subtraction facts, multiplication facts from $1 \times 1$ through $12 \times 12$ and corresponding division facts) including the use of mathematical models (2.4.K1a): addition and multiplication,					

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4	1	4	K	6	c	▲	N	\$	Shows the relationship between these operations with the basic fact families (addition facts with sums from 0 through 20 and corresponding subtraction facts, multiplication facts from 1 x 1 through 12 x 12 and corresponding division facts) including the use of mathematical models (2.4.K1a): multiplication and division,					
4	1	4	K	6	d	▲	N	\$	Shows the relationship between these operations with the basic fact families (addition facts with sums from 0 through 20 and corresponding subtraction facts, multiplication facts from 1 x 1 through 12 x 12 and corresponding division facts) including the use of mathematical models (2.4.K1a): subtraction and division.					
4	1	4	K	7					Finds factors and multiples of whole numbers from 1 through 100 (2.4.K1a).					
4	1	4	A	1	a	▲	N	\$	Solves one- and two-step real-world problems with one or two operations using these computational procedures: adds and subtracts whole numbers from 0 through 10,000 and when used as monetary amounts (2.4.A1a-b,d), e.g., Lee buys a bicycle for \$139, a helmet for \$29, and a reflector for \$6. He paid for it with a \$200 check from his grandparents. How much will he have left from the \$200 check?					
4	1	4	A	1	b	▲	N	\$	Solves one- and two-step real-world problems with one or two operations using these computational procedures: multiplies through a two-digit whole number by a two-digit whole number (2.4.A1a-b), e.g., at school, there are 22 students in each classroom. If there are 24 classes, how many students are in the classrooms?					
4	1	4	A	1	c	▲	N	\$	Solves one- and two-step real-world problems with one or two operations using these computational procedures: multiplies whole dollar monetary amounts (up through three-digit) by a one- or two-digit whole number (2.4.A1a-b,d), e.g., 112 third and fourth graders are planning a field trip. The cost per student is \$9.00. How much will the trip cost?					

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4	1	4	A	1	d	▲	N	\$	Solves one- and two-step real-world problems with one or two operations using these computational procedures: multiplies monetary amounts less than \$100 by whole numbers less than ten (2.4.A1a-d), e.g., at the book fair, a student buys 8 books on animals for \$2.69 each. How much did the student pay for the books?					
4	1	4	A	1	e	▲	N	\$	Solves one- and two-step real-world problems with one or two operations using these computational procedures: figures correct change through \$20.00 (2.4.A1a-d), e.g., buying a 65¢ drink, paying for it with a \$1 bill, and then figuring the amount of change.					
4	1	4	A	2					Generates a family of multiplication and division facts given one equation/fact (2.4.A1b), e.g., given $8 \times 9 = 72$ , the other facts are $9 \times 8 = 72$ , $72 \div 8 = 9$ , and $72 \div 9 = 8$ .					
4	2	1	K	1	a				Uses concrete objects, drawings, and other representations to work with types of patterns(2.4.K1a): repeating patterns, e.g., an AB pattern is like 1-2, 1-2, ...; an ABC pattern is like dog-horse-pig, dog-horse-pig, ...; an AAB pattern is like $\uparrow\uparrow\rightarrow$ , $\uparrow\uparrow\rightarrow$ , ...;					
4	2	1	K	1	b				Uses concrete objects, drawings, and other representations to work with types of patterns(2.4.K1a): growing patterns e.g., 2, 5, 11, 20, ...					
4	2	1	K	2	a				Uses these attributes to generate patterns: counting numbers related to number theory (2.4.K1a), e.g., multiples and factors through 12 or multiplying by 10, 100, or 1,000;					
4	2	1	K	2	b			\$	Uses these attributes to generate patterns: whole numbers that increase or decrease (2.4.K1a) , e.g., 20, 15, 10, ...;					
4	2	1	K	2	c				Uses these attributes to generate patterns: geometric shapes including one or two attributes changes (2.4.K1f), e.g., ... when the next shape has one more side; or when both color and shape change at the same time such as.					
4	2	1	K	2	d				Uses these attributes to generate patterns: measurements (2.4.K1a), e.g., 3 ft., 6 ft., 9 ft., ...;					

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4	2	1	K	2	e			\$	Uses these attributes to generate patterns: money and time (2.4.K1a,d), e.g., \$.25, \$.50, \$.75, ... or 1:05 p.m., 1:10 p.m., 1:15 p.m., ...;					
4	2	1	K	2	f				Uses these attributes to generate patterns: things related to daily life (2.4.K1a), e.g., water cycle, food cycle, or life cycle;					
4	2	1	K	2	g				Uses these attributes to generate patterns: things related to size, shape, color, texture, or movement (2.4.K1a), e.g., rough, smooth, rough, smooth, rough, smooth, or clapping hands (kinesthetic patterns).					
4	2	1	K	3				\$	Identifies, states and continues a pattern presented in visual various formats including numeric (list or table), visual (picture, table, or graph), verbal (oral description), kinesthetic (action), and written (2.4.K1a).					
4	2	1	K	4	a				Generates: a pattern (repeating, growing) (2.4.K1a); a pattern using a function table (input/output machines, T-tables) (2.4.K1e).					
4	2	1	A	1	a				Generalizes these patterns using a written description: counting numbers related to number theory (2.4.A1a),					
4	2	1	A	1	b			\$	Generalizes these patterns using a written description: whole number patterns (2.4.A1a),					
4	2	1	A	1	c				Generalizes these patterns using a written description: patterns using geometric shapes (2.4.A1f),					
4	2	1	A	1	d				Generalizes these patterns using a written description: measurement patterns (2.4.A1a),					
4	2	1	A	1	e			\$	Generalizes these patterns using a written description: money and time patterns (2.4.A1a,d),					
4	2	1	A	1	f				Generalizes these patterns using a written description: patterns using size, shape, color, texture, or movement (2.4.A1a).					

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4	2	1	A	2					Recognizes multiple representations of the same pattern (2.4.A1a), e.g., skip counting by 5s to 60; whole number multiples of 5 through 60; the multiplication table of 5 given the numerical pattern of 5, 10, 15, ..., 60; relating the concept of five minute time intervals to each of the numerals on a clock giving the pattern of 5, 10, 15, ..., 60; one nickel, two nickels, three nickels, ...; the number of fingers on twelve hands; recognizing that all of these representations are the same general pattern.					
4	2	2	K	1					Explains and uses variables and symbols to represent unknown whole number quantities from 0 through 1,000 (2.4.K1a).					
4	2	2	K	2		▲			Solves one-step equations using whole numbers with one variable and a whole number solution that:					
4	2	2	K	2	a				Solves one-step equations using whole numbers with one variable and a whole number solution that: find the unknown in a multiplication or division equation based on the multiplication facts from 1 x 1 through 12 x 12 and corresponding division facts (2.4.K1a), e.g., $60 = 10 \times n$ ;					
4	2	2	K	2	b				Solves one-step equations using whole numbers with one variable and a whole number solution that: find the unknown in a money equation using multiplication and division based upon the facts and addition and subtraction with values through \$10 (2.4.K1d), e.g., 8 quarters + 10 dimes = y dollars;					
4	2	2	K	2	c				Solves one-step equations using whole numbers with one variable and a whole number solution that: find the unknown in a time equation involving whole minutes, hours, days, and weeks with values through 200 (2.4.K1a), e.g., 180 minutes = y hours.					
4	2	2	K	3				§	Compares two whole numbers from 0 through 10,000 using the equality and inequality symbols ( $=$ , $\neq$ , $<$ , $>$ ) and their corresponding meanings (is equal to, is not equal to, is less than, is greater than) (2.4.K1b).					

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4	2	2	K	4					Reads and writes whole number equations and inequalities using mathematical vocabulary and notation, e.g., $15 = 3 \times 5$ is the same as fifteen equals three times five or $4,564 > 1,000$ is the same as four thousand, five hundred sixty-four is greater than one thousand.					
4	2	2	A	1				\$	Represents real-world problems using variables and symbols with unknown whole number quantities from 0 through 1,000 (2.4.A1a), e.g., How many weeks in twenty-eight days? can be represented by $n \times 7 = 28$ or $n = 28 \div 7$ .					
4	2	2	A	2				\$	Generates one-step equations to solve real-world problems with one unknown (represented by a variable or symbol) and a whole number solution that (2.4.A1a):					
4	2	2	A	2	a				Generates one-step equations to solve real-world problems with one unknown (represented by a variable or symbol) and a whole number solution that (2.4.A1a): add or subtract whole numbers from 0 through 1,000; e.g., Homer, Kansas has 832 nonfiction books in its library. Homer, Idaho has 652 nonfiction books in its library. How many fewer books nonfiction books are in Homer, Idaho's library? $832 - 652 = B$ ;					
4	2	2	A	2	b				Generates one-step equations to solve real-world problems with one unknown (represented by a variable or symbol) and a whole number solution that (2.4.A1a): multiply or divide using the basic facts, e.g., Tom has a sticker book and each page holds 5 stickers. If the same number of stickers is placed on each page, the book will hold 30 stickers. How many pages are in his book? This is represented by $5 \times S = 30$ or $30 \div 5 = S$ .					
4	2	2	A	3	a				Generates (2.4.A1a): real-world problems with one operation to match a given addition, subtraction, multiplication, or division equation using whole numbers through 99, e.g., given $12 \times 3 = Y$ , the student writes: I was sick for 3 days, when I got back I had 3 pages of homework. There are 12 problems on each page. How many total problems must I work?					
4	2	2	A	3	b				Generates (2.4.A1a): number comparison statements using equality and inequality symbols ( $=$ , $<$ , $>$ ) with whole numbers, measurement, and money, e.g., $1 \text{ ft} < 15 \text{ in}$ or $10 \text{ quarters} > \$2$ .					

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Grade	Standard	Benchmark	Know/Appli	Indicator	Sub-Ind.	Assessed	Non-Calc	Fin. Lit.	(Non-Assessed Indicators)	Date		% Prof(+)		Comments
									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	2	3	K	1				\$	States mathematical relationships between whole numbers from 0 through 1,000 using various methods including mental math, paper and pencil, concrete materials, and appropriate technology (2.4.K1a).					
4	2	3	K	2		▲			<p>Finds the values, determines the rule, and states the rule using symbolic notation with one operation of whole numbers from 0 through 200 using a horizontal or vertical function table (input/output machine, T-table) (2.4.K1e), e.g., using the function table, find the rule, the rule is <math>N \cdot 4</math>.</p> <p>N ?</p> <p>1 4 5 20 2 8 3 ? 4 ? ? 24</p>					
4	2	3	K	3					Generalizes numerical patterns using whole numbers from 0 through 200 with one operation by stating the rule using words, e.g., if the pattern is 46, 68, 90, 112, 134, ...; in words, the rule is add 22 to the number before.					
4	2	3	K	4					Uses a function table (input/output machine, T-table) to identify, plot, and label the ordered pairs in the first quadrant of a coordinate plane (2.4.K1a,e).					
4	2	3	A	1		▲		\$	Represents and describes mathematical relationships between whole numbers from 0 through 1,000 using concrete objects, pictures, written descriptions, symbols, equations, tables, and graphs (2.4.A1a).					

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Grade	Standard	Benchmark	Know/Appli	Indicator	Sub-Ind.	Assessed	Non-Calc	Fin. Lit.	(Non-Assessed Indicators)	Date		% Prof(+)		Comments																
									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)																	
4	2	3	A	2					<p>Finds the rule, states the rule, and extends numerical patterns using real-world applications using whole numbers from 0 through 200 (2.4.A1a,e), e.g., the teacher must order supplies for field day. For every 12 students, one red rubber ball is needed. If 6 balls are ordered, how many students will be able to play? A solution using a function table might be:</p> <table border="1"> <thead> <tr> <th>Students</th> <th>Number of Balls</th> </tr> </thead> <tbody> <tr><td>12</td><td>1</td></tr> <tr><td>24</td><td>2</td></tr> <tr><td>36</td><td>3</td></tr> <tr><td>48</td><td>4</td></tr> <tr><td>60</td><td>5</td></tr> <tr><td>72</td><td>6</td></tr> <tr><td>N</td><td><math>N \div 12</math></td></tr> </tbody> </table> <p>The rule is divide the number of students by 12 or for each group of 12 students, another ball is added. Other solutions might be using a pattern to count by 12 six times – 12, 24, 36, 48, 60, 72 or to skip count by 12 for each ball ordered.</p>	Students	Number of Balls	12	1	24	2	36	3	48	4	60	5	72	6	N	$N \div 12$					
Students	Number of Balls																													
12	1																													
24	2																													
36	3																													
48	4																													
60	5																													
72	6																													
N	$N \div 12$																													
4	2	4	K	1	a			\$	<p>Knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include: process models (concrete objects, pictures, diagrams, number lines, hundred charts, measurement tools, multiplication arrays, division sets, or coordinate planes/grids) to model computational procedures, mathematical relationships, and equations (1.1.K1a, 1.1.K2a, 1.2.K1, 1.2.K4-5, 1.3.K1-4, 1.4.K1-2, 1.4.K3a-b, 1.4.K3e, 1.4.K4, 1.4.K6-7, 2.1.K1, 2.1.K.1a-b, 2.1.K2d-g, 2.1.K3, 2.1.K4a, 2.2.K1, 2.2.K2a, 2.2.K3-4, 2.3.K1, 2.3.K4, 3.2.K1-4, 3.3.K1-2, 3.4.K1-4, 4.2.K3);</p>																					
4	2	4	K	1	b			\$	<p>Knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include: place value models (place value mats, hundred charts, base ten blocks, or unifix cubes) to compare, order, and represent numerical quantities and to model computational procedures (1.1.K1a, 1.1.K2a, 1.2.K1-3, 1.3.K1-2, 1.4.K3a-b, 1.4.K3e, 2.2.K4);</p>																					

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Grade	Standard	Benchmark	Know/Appli	Indicator	Sub-Ind.	Assessed	Non-Calc	Fin. Lit.	(Non-Assessed Indicators)	Date		% Prof(+)		Comments
									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	2	4	K	1	c			\$	Knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include: fraction and mixed number models (fraction strips or pattern blocks) and decimal models (base ten blocks or coins) to compare, order, and represent numerical quantities (1.1.K1b-c, 1.1.K2b-c, 1.2.K2, 1.3.K1-2, 1.4.K1f);					
4	2	4	K	1	d			\$	Knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include: money models (base ten blocks or coins) to compare, order, and represent numerical quantities (1.1.K1c, 1.2.K1c, 1.3.K1-2, 1.4.K3a, 1.4.K3a, 1.4.K3c-d, 1.4.K3g, 2.1.K2e, 2.2.K2b);					
4	2	4	K	1	e			\$	Knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include: function tables (input/output machines, T-tables) to model numerical and algebraic relationships (2.1.K4b, 2.3.K2, 2.3.K4, 3.4.K4);					
4	2	4	K	1	f				Knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include: two-dimensional geometric models (geoboards, dot paper, pattern blocks, or tangrams) to model perimeter, area, and properties of geometric shapes and three-dimensional geometric models (solids) and real-world objects to compare size and to model properties of geometric shapes (2.1.K2c, 2.1.K1e, 3.1.K1-6, 3.2.K5, 3.3.K3);					
4	2	4	K	1	g			\$	Knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include: two-dimensional geometric models (spinners), three-dimensional models (number cubes), and process models (concrete objects) to model probability (4.1.K1-3);					

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Grade	Standard	Benchmark	Know/Appli	Indicator	Sub-Ind.	Assessed	Non-Calc	Fin. Lit.	(Non-Assessed Indicators)	Date		% Prof(+)		Comments
									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	2	4	K	1	h			\$	Knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include: graphs using concrete objects, pictographs, frequency tables, horizontal and vertical bar graphs, line graphs, circle graphs, Venn diagrams, line plots, charts, and tables to organize and display data (4.1.K2, 4.2.K1-2);					
4	2	4	K	1	i				Knows, explains, and uses mathematical models to represent mathematical concepts, procedures, and relationships. Mathematical models include: Venn diagrams to sort data and show relationships (1.2.K2).					
4	2	4	K	2					Creates a mathematical model to show the relationship between two or more things, e.g., using pattern blocks, a whole (1) can be represented as a single shape (1/1) or two shapes (2/2) or three shapes (3/3) or six shapes (6/6). Note: shapes are shown in the standards document.					
4	2	4	A	1	a			\$	Recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: process models (concrete objects, pictures, diagrams, number lines, coordinate planes/grids, hundred charts, measurement tools, multiplication arrays, or division sets) to model computational procedures, mathematical relationships, and problem situations (1.1.A1, 1.1.A2a, 1.2.A1-3, 1.3.A1-4, 1.4.A1, 2.1.A1a-b, 2.1.A1d-f, 2.1.A2, 2.2.A1-3, 2.3.A1-2, 3.2.A1a-g, 3.2.A2-3, 3.3.A1-2, 3.4.A1-2, 4.2.A2);					
4	2	4	A	1	b			\$	Recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: place value models (place value mats, hundred charts, base ten blocks, or unifix cubes) to model problem situations (1.1A1, 1.1.A2a, 1.2.A1-3, 1.3.A2, 1.4.A1);					

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									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	2	4	A	1	c			\$	Recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: fraction and mixed number models (fraction strips or pattern blocks) and decimal models (base ten blocks or coins) to compare, order, and represent numerical quantities (1.1.A1b, 1.1.A2b-c, 1.2.A2-3, 1.3.A2, 1.4.A1d-e);					
4	2	4	A	1	d			\$	Recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: money models (base ten blocks or coins) to compare, order, and represent numerical quantities (1.1.A1b, 1.1.A2c, 1.2.A1, 1.2.A3, 1.3.A1, 1.4.A1a, 1.4.A1c-e, 2.1.A1e);					
4	2	4	A	1	e			\$	Recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: function tables (input/output machines, T-tables) to model numerical and algebraic relationships (2.3.A2);					
4	2	4	A	1	f				Recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: two-dimensional geometric models (geoboards, dot paper, pattern blocks, or tangrams) to model perimeter, area, and properties of geometric shapes and three-dimensional geometric models (solids) and real-world objects to compare size and to model properties of geometric shapes (2.1.A1c, 3.1.A1-2, 3.2.A1h, 3.3.A3);					
4	2	4	A	1	g			\$	Recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: two-dimensional geometric models (spinners), three-dimensional geometric models (number cubes), and process models (concrete objects) to model probability (4.1.A1-3);					
4	2	4	A	1	h			\$	Recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: graphs using concrete objects, pictographs, frequency tables, horizontal and vertical bar graphs, line graphs, Venn diagrams, line plots, charts, and tables to organize, display, explain, and interpret data (4.1.A2, 4.2.A1, 4.2.A3-4);					

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									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	2	4	A	1	i				Recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include: Venn diagrams to sort data and show relationships.					
4	2	4	A	2					Selects a mathematical model and explains why some mathematical models are more useful than other mathematical models in certain situations.					
4	3	1	K	1					Recognizes and investigates properties of plane figures (circles, squares, rectangles, triangles, ellipses, rhombi, octagons, hexagons, pentagons) using concrete objects, drawings, and appropriate technology (2.4.K1f).					
4	3	1	K	2					Recognizes, draws, and describes plane figures (circles, squares, rectangles, triangles, ellipses, rhombi, octagons, hexagons, pentagons) (2.4.K1f).					
4	3	1	K	3					Describes the solids (cubes, rectangular prisms, cylinders, cones, spheres, triangular prisms) using the terms faces, edges, and vertices (corners) (2.4.K1f).					
4	3	1	K	4					Recognizes and describes the square, triangle, rhombus, hexagon, parallelogram, and trapezoid from a pattern block set (2.4.K1f).					
4	3	1	K	5	a				Recognizes (2.4.k1f): squares, rectangles, rhombi, parallelograms, trapezoids as special quadrilaterals;					
4	3	1	K	5	b				Recognizes (2.4.k1f): similar and congruent figures;					
4	3	1	K	5	c				Recognizes (2.4.k1f): points, lines (intersecting, parallel, perpendicular), line segments, and rays.					
4	3	1	K	6					symmetry and draws the line(s) of symmetry if the line(s) exist(s) (2.4.K1f).					
4	3	1	A	1	a				Solves real-world problems by applying the properties of (2.4.A1f): plane figures (circles, squares, rectangles, triangles, ellipses, rhombi, parallelograms, hexagons) and lines of symmetry, e.g., print your name or the school's name in all capital letters. Identify the lines of symmetry in each letter.					

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									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	3	1	A	1	b				Solves real-world problems by applying the properties of (2.4.A1f): solids (cubes, rectangular prisms, cylinders, cones, spheres), e.g., you want to design something to store school supplies. Which of the solids could you use for storage? Why did you select that solid?					
4	3	1	A	2		▲ ■			Identifies the plane figures (circles, squares, rectangles, triangles, ellipses, rhombi, octagons, hexagons, pentagons, trapezoids) used to form a composite figure (2.4.A1f).					
4	3	2	K	1				\$	Uses whole number approximations (estimations) for length, width, weight, volume, temperature, time, perimeter, and area using standard and nonstandard units of measure (2.4.K1a).					
4	3	2	K	2	a	▲		\$	Selects, explains the selection of, and uses measurement tools, units of measure, and degree of accuracy appropriate for a given situation to measure (2.4.K1a): length, width, and height to the nearest fourth of an inch or to the nearest centimeter;					
4	3	2	K	2	b	▲		\$	Selects, explains the selection of, and uses measurement tools, units of measure, and degree of accuracy appropriate for a given situation to measure (2.4.K1a): volume to the nearest cup, pint, quart, or gallon; to the nearest liter; or to the nearest whole unit of a nonstandard unit;					
4	3	2	K	2	c	▲		\$	Selects, explains the selection of, and uses measurement tools, units of measure, and degree of accuracy appropriate for a given situation to measure (2.4.K1a): weight to the nearest ounce or pound or to the nearest whole unit of a nonstandard unit of measure;					
4	3	2	K	2	d	▲		\$	Selects, explains the selection of, and uses measurement tools, units of measure, and degree of accuracy appropriate for a given situation to measure (2.4.K1a): temperature to the nearest degree;					
4	3	2	K	2	e	▲		\$	Selects, explains the selection of, and uses measurement tools, units of measure, and degree of accuracy appropriate for a given situation to measure (2.4.K1a): time including elapsed time.					
4	3	2	K	3	a				States: the number of weeks in a year;					
4	3	2	K	3	b				States: the number of ounces in a pound;					

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									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	3	2	K	3	c				States: the number of milliliters in a liter, grams in a kilogram, and meters in a kilometer;					
4	3	2	K	3	d				States: the number of items in a dozen.					
4	3	2	K	4	a				Converts (2.4.K1a): within the customary system: inches and feet, feet and yards, inches and yards, cups and pints, pints and quarts, quarts and gallons;					
4	3	2	K	4	b				Converts (2.4.K1a): within the metric system: centimeters and meters.					
4	3	2	K	5	a				Finds(2.4.K1f): the perimeter of two-dimensional figures given the measures of all the sides.					
4	3	2	K	5	b				Finds(2.4.K1f): the area of squares and rectangles using concrete objects.					
4	3	2	A	1	a				Solves real-world problems by applying appropriate measurements: length to the nearest fourth of an inch (2.4.A1a), e.g., how much longer is the math textbook than the science textbook?					
4	3	2	A	1	b				Solves real-world problems by applying appropriate measurements: length to the nearest centimeter (2.4.A1a), e.g., a new pencil is about how many centimeters long?					
4	3	2	A	1	c				Solves real-world problems by applying appropriate measurements: temperature to the nearest degree (2.4.A1a), e.g., what would the temperature outside be if it was a good day for sledding?					
4	3	2	A	1	d				Solves real-world problems by applying appropriate measurements: weight to the nearest whole unit (pounds, grams, nonstandard unit) (2.4.A1a), e.g., Brendan went to the store and bought 2 packages of hamburger for a meatloaf. One of the hamburger packages weighed 1 lb. and 8 ozs. The other packages weighed 1 lb. and 7 ozs. What is the combined weight (to the nearest pound) of the two packages of hamburger?					
4	3	2	A	1	e				Solves real-world problems by applying appropriate measurements: time including elapsed time (2.4.A1a), e.g., Joy went to the mall at 10:00 a.m. She shopped until 4:15 p.m. How long did she shop at the mall?					

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									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	3	2	A	1	f				Solves real-world problems by applying appropriate measurements: months in a year (2.4.A1a), e.g., if it takes 208 weeks to get a college degree, and Susan has completed one year, how many more weeks does she have to complete to get her degree?					
4	3	2	A	1	g				Solves real-world problems by applying appropriate measurements: minutes in an hour (2.4.A1a), e.g., Bob has spent 240 minutes working on a project for Science. How many hours has he worked on the project?					
4	3	2	A	1	h				Solves real-world problems by applying appropriate measurements: perimeter of squares, rectangles, and triangles (2.4.A1f), e.g., a triangle has 3 equal sides of 32 inches. What is the perimeter of the triangle?					
4	3	2	A	2		▲		\$	Estimates to check whether or not measurements and calculations for length, width, weight, volume, temperature, time, and perimeter in real-world problems are reasonable (2.4.A1a), e.g., which is the most reasonable weight for your scissors – 2 ounces, 2 pounds, 20 ounces, or 20 pounds? A teacher measures one side of a square desktop at 2 feet. Which of the following perimeters is reasonable for the desktop – 2 feet, 4 square feet, 6 square feet, or 8 feet?					
4	3	2	A	3				\$	Adjusts original measurement or estimation for length, width, weight, volume, temperature, time, and perimeter in real-world problems based on additional information (a frame of reference) (2.4.A1a), e.g., your class has a large jar and a small jar. You estimate it will take 5 small jars of liquid to fill the large jar. After you pour the contents of 2 small jars in, the large jar is more that half full. Should you need to adjust your estimate?					
4	3	3	K	1					Describes a transformation using cardinal points or positional directions (2.4.K1a), e.g., go north three blocks and then west four blocks or move the triangle three units to the right and two units up.					

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4	3	3	K	2		▲ ■			Recognizes, performs, and describes one transformation (reflection/flip, rotation/turn, translation/slide) on a two-dimensional figure or concrete object (2.4.K1a).					
4	3	3	K	3					Recognizes three-dimensional figures (rectangular prisms, cylinders) and concrete objects from various perspectives (top, bottom, sides, corners) (2.4.K1f).					
4	3	3	A	1					Recognizes real-world transformations (reflection/flip, rotation/turn, translation/slide) (2.4.A1a).					
4	3	3	A	2					Gives and uses cardinal points or positional directions to move from one location to another on a map or grid (2.4.A1a).					
4	3	3	A	3					Describes the properties of geometric shapes or concrete objects that stay the same and the properties that change when a transformation is performed (2.4.A1f).					
4	3	4	K	1					Uses a number line (horizontal/vertical) to model whole number multiplication facts from 1 x 1 through 12 x 12 and corresponding division facts (2.4.K1a).					
4	3	4	K	2					Uses points in the first quadrant of a coordinate plane (coordinate grid) to identify locations (2.4.K1a).					
4	3	4	K	3		▲ ■			Identifies and plots points as whole number ordered pairs in the first quadrant of a coordinate plane (coordinate grid) (2.4.K1a).					
4	3	4	K	4					Organizes whole number data using a T-table and plots the ordered pairs in the first quadrant of a coordinate plane (coordinate grid) (2.4.K1a,e).					
4	3	4	A	1					Solves real-world problems that involve distance and location using coordinate planes (coordinate grids) and map grids with positive whole number and letter coordinates (2.4.A1a), e.g., identifying locations and giving and following directions to move from one location to another.					
4	3	4	A	2				§	Solves real-world problems by plotting whole number ordered pairs in the first quadrant of a coordinate plane (coordinate grid) (2.4.A1a), e.g., given that each movie ticket cost \$5, the student graphs the number of tickets bought and the total cost of tickets to attend a movie.					

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									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	4	1	K	1				§	Recognizes that the probability of an impossible event is zero and that the probability of a certain event is one (2.4.K1g).					
4	4	1	K	2					Lists all possible outcomes of a simple event in an experiment or simulation including the use of concrete objects (2.4.K1g-h).					
4	4	1	K	3					Recognizes and states the probability of a simple event in an experiment or simulation (2.4.K1g), e.g., when a coin is flipped, the probability of landing heads up is $\frac{1}{2}$ and the probability of landing tails up is $\frac{1}{2}$ . This can be read as one out of two or one half.					
4	4	1	A	1					Makes predictions about a simple event in an experiment or simulation; conducts an experiment or simulation including the use of concrete objects; records the results in a chart, table, or graph; and uses the results to draw conclusions about the event (2.4.A1g-h).					
4	4	1	A	2					Uses the results from a completed experiment or simulation of a simple event to make predictions in a variety of real-world problems (2.4.A1g-h), e.g., the manufacturer of Crunchy Flakes puts a prize in 20 out of every 100 boxes. What is the probability that a shopper will find a prize in a box of Crunchy Flakes, if they purchase 10 boxes?					
4	4	1	A	3					Compares what should happen (theoretical probability/expected results) with what did happen (empirical probability/experimental results) in an experiment or simulation with a simple event (2.4.A1g).					
4	4	2	K	1	a	▲	■		Organizes, displays, and reads numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including a title, labels, categories, and whole number intervals using these data displays (2.4.K1h): graphs using concrete objects, (for testing, does not have to use concrete objects in items);					

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									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	4	2	K	1	b	▲ ■								
								Organizes, displays, and reads numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including a title, labels, categories, and whole number intervals using these data displays (2.4.K1h): pictographs with a symbol or picture representing one, two, five, ten, twenty-five, or one-hundred including partial symbols when the symbol represents an even amount;						
4	4	2	K	1	c	▲ ■								
								Organizes, displays, and reads numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including a title, labels, categories, and whole number intervals using these data displays (2.4.K1h): frequency tables (tally marks);						
4	4	2	K	1	d	▲ ■								
								Organizes, displays, and reads numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including a title, labels, categories, and whole number intervals using these data displays (2.4.K1h): horizontal and vertical bar graphs;						
4	4	2	K	1	e	▲ ■								
								Organizes, displays, and reads numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including a title, labels, categories, and whole number intervals using these data displays (2.4.K1h): Venn diagrams or other pictorial displays, e.g., glyphs;						
4	4	2	K	1	f	▲ ■								
								Organizes, displays, and reads numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including a title, labels, categories, and whole number intervals using these data displays (2.4.K1h): line plots;						
4	4	2	K	1	g	▲ ■								
								Organizes, displays, and reads numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including a title, labels, categories, and whole number intervals using these data displays (2.4.K1h): charts and tables;						
4	4	2	K	1	h	▲ ■								
								Organizes, displays, and reads numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including a title, labels, categories, and whole number intervals using these data displays (2.4.K1h): line graphs;						

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Grade	Standard	Benchmark	Know/Appli	Indicator	Sub-Ind.	Assessed	Non-Calc	Fin. Lit.	(Non-Assessed Indicators)	Date		% Prof(+)		Comments
									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	4	2	K	1	i	▲ ■			Organizes, displays, and reads numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including a title, labels, categories, and whole number intervals using these data displays (2.4.K1h): circle graphs.					
4	4	2	K	2			\$		Collects data using different techniques (observations, polls, surveys, interviews, or random sampling) and explains the results (2.4.K1h).					
4	4	2	K	3	a				Identifies, explains, and calculates or finds these statistical measures of a data set with less than ten whole number data points using whole numbers from 0 through 1,000 (2.4.K1a): minimum and maximum values,					
4	4	2	K	3	b				Identifies, explains, and calculates or finds these statistical measures of a data set with less than ten whole number data points using whole numbers from 0 through 1,000 (2.4.K1a): range,					
4	4	2	K	3	c				Identifies, explains, and calculates or finds these statistical measures of a data set with less than ten whole number data points using whole numbers from 0 through 1,000 (2.4.K1a): mode,					
4	4	2	K	3	d				Identifies, explains, and calculates or finds these statistical measures of a data set with less than ten whole number data points using whole numbers from 0 through 1,000 (2.4.K1a): median when data set has an odd number of data points,					
4	4	2	K	3	e				Identifies, explains, and calculates or finds these statistical measures of a data set with less than ten whole number data points using whole numbers from 0 through 1,000 (2.4.K1a): mean when data set has a whole number mean.					
4	4	2	A	1	a				Interprets and uses data to make reasonable inferences and predictions, answer questions, and make decisions from these data displays (2.4.A1h): graphs using concrete objects;					
4	4	2	A	1	b				Interprets and uses data to make reasonable inferences and predictions, answer questions, and make decisions from these data displays (2.4.A1h): pictographs with a symbol or picture representing one, two, five, ten, twenty-five, or one-hundred including partial symbols when the symbol represents an even amount;					

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Grade	Standard	Benchmark	Know/Appli	Indicator	Sub-Ind.	Assessed	Non-Calc	Fin. Lit.	(Non-Assessed Indicators)	Date		% Prof(+)		Comments
									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	4	2	A	1	c				Interprets and uses data to make reasonable inferences and predictions, answer questions, and make decisions from these data displays (2.4.A1h): frequency tables (tally marks);					
4	4	2	A	1	d				Interprets and uses data to make reasonable inferences and predictions, answer questions, and make decisions from these data displays (2.4.A1h): horizontal and vertical bar graphs;					
4	4	2	A	1	e				Interprets and uses data to make reasonable inferences and predictions, answer questions, and make decisions from these data displays (2.4.A1h): Venn diagrams or other pictorial displays;					
4	4	2	A	1	f				Interprets and uses data to make reasonable inferences and predictions, answer questions, and make decisions from these data displays (2.4.A1h): line plots;					
4	4	2	A	1	g				Interprets and uses data to make reasonable inferences and predictions, answer questions, and make decisions from these data displays (2.4.A1h): charts and tables;					
4	4	2	A	1	h				Interprets and uses data to make reasonable inferences and predictions, answer questions, and make decisions from these data displays (2.4.A1h): line graphs.					
4	4	2	A	2	a	▲		\$	Uses these statistical measures of a data set using whole numbers from 0 through 1,000 with less than ten whole number data points to make reasonable inferences and predictions, answer questions, and make decisions (2.4.A1a): minimum and maximum values,					
4	4	2	A	2	b	▲		\$	Uses these statistical measures of a data set using whole numbers from 0 through 1,000 with less than ten whole number data points to make reasonable inferences and predictions, answer questions, and make decisions (2.4.A1a): range,					
4	4	2	A	2	c	▲		\$	Uses these statistical measures of a data set using whole numbers from 0 through 1,000 with less than ten whole number data points to make reasonable inferences and predictions, answer questions, and make decisions (2.4.A1a): mode,					

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Grade	Standard	Benchmark	Know/Appli	Indicator	Sub-Ind.	Assessed	Non-Calc	Fin. Lit.	(Non-Assessed Indicators)	Date		% Prof(+)		Comments
									▲ (Assessed Indicators)	Date	% Prof(+)	Date	% Prof(+)	
4	4	2	A	2	d	▲		\$	Uses these statistical measures of a data set using whole numbers from 0 through 1,000 with less than ten whole number data points to make reasonable inferences and predictions, answer questions, and make decisions (2.4.A1a): median when the data set has an odd number of data points,					
4	4	2	A	2	e	▲		\$	Uses these statistical measures of a data set using whole numbers from 0 through 1,000 with less than ten whole number data points to make reasonable inferences and predictions, answer questions, and make decisions (2.4.A1a): mean when the data set has a whole number mean.					
4	4	2	A	3				\$	Recognizes that the same data set can be displayed in various formats including the use of concrete objects (2.4.A1h).					
4	4	2	A	4					Recognizes and explains the effects of scale and interval changes on graphs of whole number data sets (2.4.A1h).					