Step Up to the TEKS by GF Educators, Inc.

Fourth Grade Mathematics

2018 Released Items Analysis





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\int	Item Analysis	J

2018 Released Items

Category 1

4th Grade Math

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TEKS interproting the pla	4.2A Supporting Standard et the value of each place-value position as 10 times the position to th ce to its left	e right and a	as one-tenth of the value of
	tadium cold 22 200 tickets to a concert. Which statement	:	Item Analysis
ab ⁱ	out this number is true?	Verb	Interpret
A	The value of the digit in the tens place is 10 times the value of the digit in the hundreds place.	Using or Including	NA
В	The value of the digit in the thousands place is $\frac{1}{10}$ the value of the digit in the ten thousands place.	Concept	Place-Value Position
С	The value of the digit in the hundreds place is 10 times the value of the digit in the thousands place.	Process TEKS	4.1A, 4.1B, 4.1G
D	The value of the digit in the ten thousands place is $\frac{1}{10}$ the value of the digit in the hundreds place.	GF www	Provided by: Educators STEP UP TO THE TEKS .StepUpTEKS.com
TEKS represe expand	4.2B Readiness Standard ent the value of the digit in whole numbers through 1,000,000,000 an led notation and numerals	d decimals to	the hundredths using
2 Rit at	a bought three and forty-eight hundredths pounds of bananas the store. How is this number written in expanded notation?	Verb	Represent
F	$(3 \times 1) + (4 \times 0.1) + (8 \times 0.01)$ $(3 \times 100) + (4 \times 10) + (8 \times 1)$	Using or Including	Expanded Notation
H J	$(3 \times 1) + (4 \times 0.01) + (8 \times 0.1)$ $(3 \times 100) + (4 \times 0.1) + (8 \times 0.01)$	Concept	Value of Digits in Whole Numbers
		Process TEKS	4.1A, 4.1B, 4.1F
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4 th Grad	le Math
	Item Analysis
Verb	Relate
Using or Including	NA
Concept	Decimals
Process TEKS	4.1A, 4.1B, 4.1D, 4.1F
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www	v.StepUpTEKS.com
	Item Analysis
Verb	Item Analysis Relate
Verb Using or Including	Item Analysis Relate NA
Verb Using or Including Concept	Item Analysis Relate NA Fractions
Verb Using or Including Concept Process TEKS	Item Analysis Relate NA Fractions 4.1A, 4.1B, 4.1D, 4.1F
	4th Grad Verb Using or Including Concept Process TEKS



ITEM

Item Analysis 9 The thickness of Jacob's cell phone is $\frac{3}{8}$ inch. The thickness of Verb Compare Crosby's cell phone is less than Jacob's. Using or Which measurement could be the thickness of Crosby's cell NA Including phone? **Different Numerators** Concept and Denominators Process 4.1A, 4.1B, 4.1F ∉ inch Α TEKS $\frac{4}{7}$ inch **Provided by:** В $\frac{1}{3}$ inch С $\frac{5}{6}$ inch D www.StepUpTEKS.com





TEKS 4.3F Supporting Standard evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole

ITEM

21 Greg sorted his collection of baseball cards.

- Greg will give $\frac{1}{5}$ of his collection to his brother.
- Greg will sell $\frac{4}{10}$ of his collection to a card shop.

Which statement is true?

- Α Greg will have exactly half of his collection left.
- Greg will sell more than half his collection to a card shop. В
- С Greg will have less than half of his collection left.
- Greg will give more than half his collection to his brother. D

	Item Analysis	
Verb	Evaluate	
Using or Including	Objects	
Concept	Addition of Fractions	
Process TEKS	4.1A, 4.1B, 4.1C, 4.1G	
Provided by: Frovided By: Fr		

IΑ 2018 Released Items Item Analysis 4th Grade Math Category 2 **TEKS 4.4A Readiness Standard** add and subtract whole numbers and decimals to the hundredths place using the standard algorithm ITEM **Item Analysis** 3 Hannah drew straight lines on her driveway with chalk. The table shows the lengths of the lines. Verb Subtract Hannah's Chalk Lines Length Using or Line (meters) Standard Algorithm Including Р 1.8 4.05 Q Concept Decimals R 7 S 7.75 Process 4.1A, 4.1B, 4.1F TEKS What is the difference in meters between the length of Line S **Provided by:** and the length of Line P? 7.57 m Α **GF/Educators** 5.95 m В С 3.70 m **D** 6.15 m www.StepUpTEKS.com **TEKS 4.4A Readiness Standard** add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

ITEM

- **24** Sandy purchased two patio chairs that cost \$57.65 each and a table that cost \$146.22. What is the total cost of these items?
 - **F** \$203.87
 - **G** \$350.09
 - **H** \$140.42
 - **J** \$261.52

Item AnalysisVerbAddUsing or
IncludingStandard AlgorithmConceptDecimalsProcess
TEKS4.1A, 4.1B, 4.1FProvided by:Provided by:ConceptUp TO THE TEKSwww.StepUpTEKS.com



TEKS 4.4F Supporting Standard use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor

ITEM

26 A teacher put 378 marbles into 9 containers. He put the same number of marbles into each container.

How many marbles did the teacher put into each container?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

Item Analysis		
Verb	Use	
Using or Including	Strategies	
Concept	Multiply Three-Digit by One-Digit	
Process TEKS	4.1A, 4.1B, 4.1F	
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\mathcal{L}	IA 2018 Released Items		
\sum	Item nalysis Category 2	4 th Grad	e Math
TE so	KS 4.4H Readiness Standard ve with fluency one- and two-step problems involving multiplication and c	livision, incluc	ling interpreting remainders
IT	EM Fran bought 4 chirts that wore \$13 each She also bought a	1	item Analysis
0	pair of socks for \$4.29	Verb	Solve
	What was the total amount Fran paid for the shirts and socks?	Using or Including	Fluency
	F \$21.20 G \$56.29	Concept	Multiplication
	H \$69.16J Not here	Process TEKS	4.1A, 4.1B, 4.1F
		WWW	Educators STEP UP TO THE TEKS .StepUpTEKS.com
_			
Te vi	KS 4.5A Readiness Standard present multi-step problems involving the four operations with whole num th a letter standing for the unknown quantity	bers using str	ip diagrams and equations
	EM Darren drank 3 glasses of water every day for 6 days. Each	1	item Analysis
	glass contained 12 ft oz of water.	Verb	Represent
	Which statement represents w , the total amount of water in fluid ounces that Darren drank during these 6 days?	Using or Including	Equations
	A $3 + 6 + 12 = w$	Concept	Multiplication Division
	B $12 \times 6 = w$ C $3 \times 6 \times 12 = w$	Process TEKS	4.1A, 4.1B, 4.1F
	D $3 \times 12 \div 6 = W$	WWW	Provided by: Educators STEP UP TO THE TEKS .StepUpTEKS.com



TEKS 4.5B Readiness Standard

represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

ITEM

8 A number pattern begins with these values.

6, 12, 18. 24. ...

Which table correctly represents the relationship between the position of a number in the pattern and the value of that number?

	Position	Numerical Expression	Value
E	6	6×1	6
Г	12	12 × 1	12
	18	18×1	18
	24	24×1	24
	Position	Numerical Expression	Value
c	Position	Numerical Expression 1 + 6	Value 7
G	Position 1 2	Numerical Expression 1+6 2+6	Value 7 8
G	Position 1 2 3	$\frac{\text{Numerical}}{\text{Expression}}$ $\frac{1+6}{2+6}$ $3+6$	Value 7 8 9
G	Position 1 2 3 4	$\frac{\text{Numerical}}{\text{Expression}}$ $\frac{1+6}{2+6}$ $\frac{3+6}{4+6}$	Value 7 8 9 10

	Position	Numerical Expression	Value
	6	6÷6	1
п	12	12÷6	2
	18	18÷6	3
	24	24 ÷ 6	4
	Position	Numerical Expression	Value
	1	1×6	6
J	2	2 × 6	12

 3×6

 4×6

3

Item Analysis		
Verb	Represent	
Using or Including	Equations	
Concept	Addition Subtraction	
Process TEKS	4.1B, 4.1E, 4.1F	
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18

24

IA 2018 Released Items Item Analysis 4th Grade Math **Category 2 EKS 4.5B Readiness Standard** represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence ITEM **Item Analysis 33** The table shows a relationship between the input numbers and the output numbers generated by a number machine. Verb Represent Number Machine Input Output Using or Input-Output Table 15 1 Including 2 16 3 17 Number Pattern Concept 4 18 Process 4.1B, 4.1E, 4.1F Which number shows the same relationship as the one shown in TEKS the table? Provided by: Α 🗍 → Output Input + 14 Educators -> Output В ĊD 15 С -> Output 70 www.StepUpTEKS.com D 🗍 → Output

	Item Analysis		
Verb			
Using or Including			
Concept			
Process TEKS			
	Provided by:		
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TEKS 4.5D Readiness Standard solve problems related to perimeter and area of rectangles where dimensions are whole numbers

ITEM **Item Analysis 30** The model represents Norman's rectangular backyard garden. Norman will plant carrots in the rectangular section of the Verb Solve garden labeled "Carrots" in the model. Norman's Garden Using or - 30 ft -Whole Numbers Including Carrots Concept Area Process 4.1A, 4.1B, 4.1C, 4.1E, 24 ft 4.1F TEKS What is the area in square feet of the section where Norman will Provided by: plant carrots? F. 40 square feet G 224 square feet н 336 square feet www.StepUpTEKS.com J 84 square feet



4th Grade Math





4th Grade Math

TEKS 4.6D Readiness Standard classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size		
ITEM 19 Hayden drew a polygon that has exactly two right angles. Which	[]	Item Analysis
of these could be the polygon Hayden drew?	Verb	Classify
A Right triangleB Right trapezoid	Using or Including	Right Angles
C Rectangle D Rhombus	Concept	Two-Dimensional Figures
	Process TEKS	4.1A, 4.1B, 4.1F
		Provided by:
	GF www	Educators STEP UP TO THE TEKS
	<u> </u>	
TEKS_4_7C Readiness Standard		
determine the approximate measures of angles in degrees to the nearest wh	ole number u	sing a protractor
25 Which angle has a measure closet to 95°?	· · ·	Item Analysis







Item Analysis		
Verb	Determine	
Using or Including	Protractor	
Concept	Measure of Angles	
Process TEKS	4.1B, 4.1E, 4.1F	
Provided by: Final Step UP TO THE TEKS www.StepUpTEKS.com		



IΑ 2018 Released Items Item Analysis 4th Grade Math **Category 3** EKS 4.8C Readiness Standard solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate **12** The table shows the chores Randy did Saturday morning and the **Item Analysis** amount of time he spent on each chore. Verb Solve Randy's Chores Amount of Time Chore (minutes) Using or 40 Addition Sweeping the garage Including Raking the yard 55 35 Cleaning tools Measurements Washing the car 45 Concept Weeding the garden 30 Process 4.1A, 4.1B, 4.1E, 4.1F How much time did Randy spend doing these chores? TEKS Provided by: F 3 hours 25 minutes 3 hours 30 minute G **GF/Educators** н 2 hours 5 minutes J 2 hours 45 minutes www.StepUpTEKS.com

TEKS 4.8C Readiness Standard

solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

ITEM

34 Melanie had two \$10 bills, one \$5 bill, four dimes, and six pennies. Then she bought a fruit cup for \$2.19.

How much money did Melanie have after she bought the fruit cup?

- **F** \$27.65
- **G** \$25.46
- **H** \$23.27
- **J** \$23.07

:	Item Analysis			
Verb	Solve			
Using or Including	Addition			
Concept	Length			
Process TEKS	4.1A, 4.1B, 4.1F			
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TEKS 4.9A Readiness Standard represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions

ITEM

22 The frequency table shows the number of times some people visited a movie theater last year.

Movie Theater Visitors			
Number of Visits	Number of People		
1-5	III		
6-10	¥		
11-15	¥		
16-20	=		

Which set of data could the frequency table represent?

- F. 1, 2, 2, 3, 6, 7, 7, 9, 12, 12, 12, 14, 17, 18, 20
- **G** 0, 2, 4, 5, 6, 6, 7, 8, 9, 11, 11, 13, 14, 15, 20, 20, 20
- **H** 1, 5, 6, 10, 11, 15, 16, 20, 4, 5, 6, 3
- 2, 2, 4, 5, 6, 6, 7, 8, 9, 11, 11, 13, 14, 15, 20, 20, 20 J

Item Analysis				
Verb	Represent			
Using or Including	Frequency Table Stem-and-Leaf Plot			
Concept	Data Whole Numbers			
Process TEKS	4.1A, 4.1B, 4.1D, 4.1F			
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IA 2018 Released Items		
Analysis Category 4	4 [™] Grad	e Math
EKS 4.9B Supporting Standard olve one- and two-step problems using data in whole number, decimal, and lot, or stem-and-leaf plot	d fraction form	n in a frequency table, dot
TEM	1	Item Analysis
31 The stem and leaf plot shows the number of tickets Stephen wor when he played games at a carnival.	Verb	Solve
Number of Tickets Won		Decimals Stem-and-Leaf Plot
8 48 9 068 10 55	Concept	One-Step Problem
11 7 916 means 96 tickets.	Process TEKS	4.1A, 4.1B, 4.1E, 4.1
 A 783 B 178 C 81 D 678 	www	Educators STEP UP TO THE TEKS StepUpTEKS.com
EKS 4.10A Supporting Standard istinguish between fixed and variable expenses	·	
7 The table shows the amounts Sheldon and Jenna paid for electricity in their apartments each month for the last six	Verb	Distinguish
Month Amount Sheldon Paid Amount Jenna Paid	Using or Including	NA
January \$89.99 \$112.37		

Only Jenna's electricity expense was a fixed expense. Both Sheldon's electricity expense and Jenna's electricity С expense were variable expenses.

Only Sheldon's electricity expense was a fixed expense.

\$89.99

\$89.99

\$89.99

\$89.99

\$89.99

Based on the table, which statement is true about the amounts Sheldon and Jenna paid for electricity during these six months?

\$87.21

\$90.87

\$105.82

\$121.13

\$130.45

February

March

April

May

June

D Both Sheldon's electricity expense and Jenna's electricity expense were fixed expenses.

Concept	Expenses			
Process TEKS	4.1A, 4.1B, 4.1E, 4.1F			
Provided by:				
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Α

В

Category 1 Numerical Representations and Relationships 9 Total Ouestions

TEKS	Item	Correct Answer	Process TEKS
4.2A interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left	13	В	4.1A, 4.1B, 4.1G
4.2B represent the value of the digit in whole numbers through 1,000,000,000	2	F	4.1A, 4.1B, 4.1F
and decimals to the hundredths using expanded notation and numerals	20	J	4.1A, 4.1B, 4.1E, 4.1F
4.2C compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =	NT		
4.2D round whole numbers to a given place value through the hundred thousands place	NT		
4.2E represent decimals, including tenths and hundredths, using concrete and visual models and money	5	D	4.1A, 4.1B, 4.1E, 4.1F
4.2F compare and order decimals using concrete and visual models to the hundredths	NT		
4.2G relate decimals to fractions that name tenths and hundredths	15	8.09	4.1A, 4.1B, 4.1D, 4.1F
	27	C	4.1A, 4.1B, 4.1D, 4.1F
4.2H determine the corresponding decimal to the tenths or hundredths place of a specified point on a number line	NT		
4.3A represent a fraction a/b as a sum of fractions $1/b$, where a and b are whole numbers and $b > 0$, including when $a > b$	NT		
4.3B decompose a fraction in more than one way into a sum of fractions with the same denominator using concrete and pictorial models and recording results with symbolic representations	23	Α	4.1B, 4.1E, 4.1F
4.3C determine if two given fractions are equivalent using a variety of methods	NT		
4.3D compare two fractions with different numerators and different denominators	9	С	4.1A, 4.1B, 4.1F
and represent the comparison using the symbols >, =, or <	29	В	4.1A, 4.1B, 4.1F
4.3G represent fractions and decimals to the tenths or hundredths as distances from zero on a number line	NT		

Shaded - Readiness TEKS, NT - Not Tested Readiness TEKS - 6/9 questions

Category 2 Computations and Algebraic Relationships 11 Total Ouestions

TEKS	Item	Correct Answer	Process TEKS
4.3E represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations	18	J	4.1A, 4.1B, 4.1E, 4.1F
4.3F evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole	21	С	4.1B, 4.1E, 4.1G
4.4A add and subtract whole numbers and decimals to the hundredths place using the standard algorithm	3	В	4.1A, 4.1B, 4.1F
	24	J	4.1A, 4.1B, 4.1F
4.4B determine products of a number and 10 or 100 using properties of operations and place value understandings	NT		
4.4C represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15	16	н	4.1B, 4.1D, 4.1F
4.4D use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one- digit number and to multiply a two- digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties	NT		
4.4E represent the quotient of up to a four- digit whole number divided by a one- digit whole number using arrays, area models, or equations	NT		
4.4F use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor	26	42	4.1A, 4.1B, 4.1F
4.4G round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers	NT		
4.4H solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders	6	G	4.1A, 4.1B, 4.1F
4.5A solve with fluency one- and two-step	11	С	4.1A, 4.1B, 4.1F
and division, including interpreting remainders	28	G	4.1A, 4.1B, 4.1E, 4.1F
4.5B represent problems using an input- output table and numerical expressions to generate a number pattern that	8	J	4.1B, 4.1E, 4.1F
the relationship of the values in the resulting sequence and their position in the sequence	33	Α	4.1B, 4.1E, 4.1F

Shaded - Readiness TEKS, NT - Not Tested Readiness TEKS - 8/11 questions

Category 3 Geometry and Measurement 10 Total Ouestions

TEKS	Item	Correct Answer	Process TEKS
4.5D solve problems related to perimeter and area of rectangles where dimensions are whole numbers	10 30	G 1	4.1A, 4.1B, 4.1C, 4.1E, 4.1F 4.1A, 4.1B, 4.1C, 4.1E, 4.1F
4.6A identify points, lines, line segments, rays, angles, and perpendicular and parallel lines	32	G	4.1A, 4.1B, 4.1F
4.6B identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure	4	F	4.1B, 4.1E, 4.1F
4.6C apply knowledge of right angles to identify acute, right, and obtuse triangles	ΝΤ		
4.6D classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size	19	В	4.1A, 4.1B, 4.1F
4.7C determine the approximate measures of angles in degrees to the nearest whole number using a protractor	25	С	4.1B, 4.1E, 4.1F
4.7D draw an angle with a given measure	NT		
4.7E determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures	7	152	4.1B, 4.1E, 4.1F
4.8A identify relative sizes of measurement units within the customary and metric systems	ΝΤ		
4.8B convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table	14	F	4.1B, 4.1E, 4.1F
4.8C solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and	12	F	4.1A, 4.1B, 4.1E, 4.1F
money using addition, subtraction, multiplication, or division as appropriate	34	н	4.1A, 4.1B, 4.1F

Shaded - Readiness TEKS, NT - Not Tested Readiness TEKS - 6/10 questions

Category 4 **Data Analysis and Personal Finance** 4 Total Questions

TEKS	Item	Correct Answer	Process TEKS
4.9A represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions	1	D	4.1A, 4.1B, 4.1D, 4.1F
	22	J	4.1A, 4.1B, 4.1D, 4.1F
4.9B solve one- and two-step problems using data in whole number, decimal, and fraction form in a frequency table, dot plot, or stem-and-leaf plot	31	Α	4.1A, 4.1B, 4.1E, 4.1F
4.10A distinguish between fixed and variable expenses	17	A	4.1A, 4.1B, 4.1E, 4.1F
4.10B calculate profit in a given situation	NT		
4.10E describe the basic purpose of financial institutions, including keeping money safe, borrowing money, and lending	NT		

Shaded - Readiness TEKS, NT - Not Tested Readiness TEKS - 2/4 questions