

Final 18-19 Math Scales

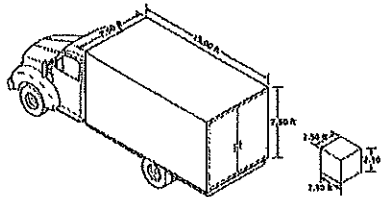
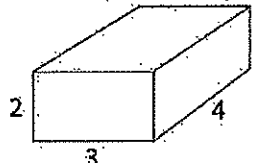
Strand: Computation		
Topic: 5.C.1 - Multiply Whole Numbers		
Level: Fifth Grade		
Score	Description	Sample Tasks
Score 4.0	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	Student can provide answer in multiple forms (ex. fraction remainder, decimal, etc.)
3.5	In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p><b>The student:</b></p> <ul style="list-style-type: none"> <li>-multiplies multi-digit numbers</li> <li>-applies multiplication to real world applications</li> </ul> <p><b>The student exhibits no major errors or omissions.</b></p>	-345 x 23=
2.5	No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	<p><b>There are no major errors or omissions regarding the simpler details and processes as the student:</b></p> <p><b>Recognizes or recalls specific terminology, such as:</b></p> <ul style="list-style-type: none"> <li>- multiply, factor, product, whole number place value</li> </ul> <p><b>Performs basic processes, such as:</b></p> <ul style="list-style-type: none"> <li>- multiplies numbers up to 4 digits by a 1 digit number</li> <li>-understands the relationship between multiplication and division</li> <li>-demonstrates fluency (<i>fluency is flexibility, being able to use a strategy to determine an unknown fact, accuracy, demonstrating the correct answer, efficiency, being able to answer within 5 seconds</i>) of basic multiplication facts</li> </ul> <p><b>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</b></p>	<p>-1,437 x 5 =</p> <p>-Xtra Math</p> <p>-Running records</p>
1.5	Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
0.5	With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Final 18-19 Math Scales

Strand: Computation		
Topic: 5.C.2 - Divide Whole Numbers		
Level: Fifth Grade		
	(In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	Sample Tasks
Score 4.0		<p>-The student correctly interprets the remainder in a word problem that involves dividing 2-digit divisors and up to 4-digit dividends. The student fully shows their work.</p> <p>-Student can provide answer in multiple forms (ex. fraction remainder, decimal, etc.)</p>
	3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p><b>The student:</b></p> <ul style="list-style-type: none"> <li>-finds whole-number quotients and remainders with up to four-digit dividends and two-digit divisors</li> <li>-interprets the remainder of a division problem correctly, knowing when to show remainder, leave remainder off of the answer, or add one to the quotient to accommodate the remainder</li> <li>-applies division to real world applications</li> </ul> <p><b>The student exhibits no major errors or omissions.</b></p>	<p>-Find the quotient of 7,983 and 24. Write the remainder as a fraction if necessary.</p> <p>-The fifth and sixth grade students are taking a field trip to Washington D.C. If 92 people can fit on a bus, how many buses are needed if there are 1,017 students and 47 chaperones attending the trip?</p>
	2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	<p>There are no major errors or omissions regarding the simpler details and processes as the student:</p> <p><b>Recognizes or recalls specific terminology, such as:</b></p> <ul style="list-style-type: none"> <li>-divide, divisor, dividend, quotient, remainder, whole number place value</li> </ul> <p><b>Performs basic processes, such as:</b></p> <ul style="list-style-type: none"> <li>-finds whole-number quotients and remainders with up to four-digit dividends and one-digit divisors</li> <li>-understands the relationship between multiplication and division</li> <li>-demonstrates fluently (fluency is flexibility, being able to use a strategy to determine an unknown fact, accuracy, demonstrating the correct answer, efficiency) division facts</li> </ul> <p><b>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</b></p>	<p>-Divide 1,234/6; write the remainder as a fraction if necessary.</p> <p>-Find the quotient of 2,579 and 9, write the remainder as a fraction.</p> <p>-Xtra math</p> <p>-Running records</p>
	1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Strand: Computation		
Topic: 5.C.8 and 5.AT.5 - Multiply Decimals		
Level: Fifth Grade		
		Sample Tasks
Score 4.0	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	<p>-Estimate the product of the numbers 5.26 and 7.42. Then, multiply to find the exact answer. Show all of your work.</p> <p>-Megan's 5th grade class went to Holiday World for the day. There were 31 students (including Megan), 5 parents, and the teacher. Tickets were \$39.95 each. Inside the park they each bought a slice of pizza and a drink for \$8.77. How much did they spend in all at Holiday World?</p>
	3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p><b>The student:</b></p> <ul style="list-style-type: none"> <li>-multiplies multi-digit numbers that include whole numbers and decimals to the hundredths place</li> <li>-describes the strategy used and explains the reasoning</li> <li>-uses multiplication in real world applications</li> <li>-identifies and analyzes errors in the mathematical process of multiplication.</li> </ul> <p>The student exhibits no major errors or omissions.</p>	<p>-2.43 x .23 = _____</p> <p>-Bryce used 2.5 cans of green beans in a casserole. Each can contains 10.75 ounces of green beans. How many ounces of green beans did Bryce use in the casserole?</p>
	2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	<p>There are no major errors or omissions regarding the simpler details and processes as the student:</p> <p>Recognizes or recalls specific terminology, such as: multiply, decimal, place value, product</p> <p>Performs basic processes, such as:</p> <ul style="list-style-type: none"> <li>-Understands relationships between whole numbers and decimals</li> <li>-Multiplies a whole number with a decimal</li> <li>-demonstrates more than one method to find the product</li> <li>-utilizes estimation to determine if product is reasonable</li> </ul> <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>	<p>-3 x 0.5 = _____</p> <p>-7 x 2.4 = _____</p> <p>-4 x 4.3 = _____</p> <p>-This is Elmer's work on a multiplication problem. Use estimation to explain why Elmer's answer is not reasonable. What error do you think Elmer made? Why do you think he made this mistake?</p> $  \begin{array}{r}  11 \\  179 \\  \times 64 \\  \hline  716 \\  11024 \\  \hline  11790  \end{array}  $
	1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Strand: Computation		
Topic: 5.C.8 & 5.AT.5 - Divide decimals to the hundredths		
Level: Fifth Grade		
	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	Sample Tasks
Score 4.0		-Estimate the quotient of the numbers. Then, divide to find the exact answer. Show all of your work. -Describe how you identify the number of decimal places that should be in the quotient when you divide two decimals. -Know how to handle a repeating remainder -Choose all the expressions that are equal to $1.24 \div 10$ - $12.4 \div 10^2$ - $.124 \div 100$ - $1240 \div 10^4$ - $12.4 \div 1$ - $124 \div 1000$
	3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<b>The student:</b> -divides multi-digit numbers that include decimals to the hundredths place -relates the strategy used to a written method and explains the reasoning -uses appropriate models to perform all mathematical operations -uses division of decimals in real world applications  <b>The student exhibits no major errors or omissions.</b>	-1.25 divided by 5= _____  -When Mrs. Durst ordered more paint. The purchase order showed she purchased 275.2 ounces of paint in all. If each bottle is 8.6 ounces, how many bottles of paint did she order?
	2.8 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	There are no major errors or omissions regarding the simpler details and processes as the student:  <b>Recognizes or recalls specific terminology, such as:</b> -divide, decimal, place value, quotient  <b>Performs basic functions such as the following:</b> -Understands relationship between division and subtraction -Divides a whole number with a decimal -Understands properties of operations  However, the student exhibits major errors or omissions regarding the more complex ideas and processes.	-0.82 divided by 2= _____ -0.99 divided by 3 = _____ -0.46 divided by 2 = _____
	1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	Prerequisite Skills: Rounding whole numbers and decimals

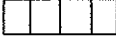
Strand: Measurement		
Topic: 5.M.4, 5.M.5, and 5.M.6 - Volume of Rectangular Prisms		
Level: Fifth Grade		
Score 4.0	<p><b>In addition to Score 3.0, the student:</b></p> <ul style="list-style-type: none"> <li>-Uses the formula to find the volume when the length, width, and height have fraction and/or decimal values.</li> <li>-Rounds the values to find an estimated volume of a rectangular prism.</li> <li>-Finds volume of complex figures.</li> </ul>	<p style="text-align: center;"><b>Sample Tasks</b></p> <p>The Jones' are moving and hired the 2 Guys and a Truck Moving Company. Below is a diagram of the moving company's truck. How many boxes will the Jones be able to fit inside the moving truck?</p> 
3.5   In addition to score 3.0 performance, in-depth inferences and applications with partial success.		
Score 3.0	<p><b>The student:</b></p> <ul style="list-style-type: none"> <li>-Uses the picture to find the length, width, and height of a rectangular prism.</li> <li>-Uses the correct formula to find the volume of a rectangular prism.</li> <li>-Uses volume in real-world applications</li> <li>- Finds the volume of complex figures</li> </ul> <p><b>The student exhibits no major errors or omissions.</b></p>	<p>-Ms. Smith bought a sandbox that is shaped like a rectangular prism. A diagram of the sandbox is shown below.</p>  <p>-Each bag of sand Ms. Smith buys to fill the sandbox fills 4 cubic feet. How many bags will Ms. Smith need to fill the sandbox?</p>
2.5   No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.		
Score 2.0	<p><b>There are no major errors or omissions regarding the simpler details and processes as the</b></p> <p><b>Recognizes or recalls specific terminology, such as:</b></p> <ul style="list-style-type: none"> <li>- length, width, height, rectangular prism, cubic</li> </ul> <p><b>Performs basic processes, such as:</b></p> <ul style="list-style-type: none"> <li>-Labels the length, width, and height of an object</li> <li>-Demonstrates understanding of multiplication facts</li> <li>- Finds the volume of a right rectangular prism using the appropriate</li> </ul> <p><b>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</b></p>	<p>length: 6 yd.</p> <p>width: 8 yd</p> <p>height: 7 yd.</p> <p>volume = <math>6 \times 8 \times 7 = 336 \text{ yd.}^3</math></p>
1.5   Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.		
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
0.5   With help, a partial understanding of the 2.0 content, but not the 3.0 content.		
Score 0.0	Even with help, no understanding or skill demonstrated.	

Final 18-19 Math Scales

Strand: Number Sense		
Topic: 5.NS.1 - Compare and Order Decimals and Fractions using number line		
Level: Fifth Grade		
Score 4.0	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	<p style="text-align: center;"><b>Sample Tasks</b></p> <p>Place the following fractions, mixed numbers, and decimals on the number line:</p> <p style="text-align: center;"><math>\frac{3}{8}</math>, 0.5, <math>1\frac{5}{9}</math>, <math>1\frac{1}{3}</math></p>
	3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p><b>The student:</b></p> <ul style="list-style-type: none"> <li>-uses a number line to compare and order fractions, mixed numbers, and decimals</li> <li>-converts decimals to fractions</li> <li>-converts fractions to decimals</li> </ul> <p><b>The student exhibits no major errors or omissions.</b></p>	<ul style="list-style-type: none"> <li>-Compare <math>\frac{1}{2}</math> and <math>\frac{1}{4}</math></li> <li>-Compare <math>1\frac{1}{4}</math> to <math>2\frac{1}{4}</math> using a number line</li> <li>-Put the fractions in order from least to greatest <math>\frac{1}{2}</math>, <math>\frac{4}{16}</math>, and <math>\frac{6}{12}</math></li> <li>-Compare .25, .75, and <math>1\frac{1}{4}</math> using a number line</li> </ul>
	2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	<p><b>There are no major errors or omissions regarding the simpler details and processes as the student:</b></p> <p><b>Recognizes or recalls specific terminology, such as:</b></p> <ul style="list-style-type: none"> <li>-greater than, less than, equal, convert, equivalent</li> </ul> <p><b>Performs basic processes, such as:</b></p> <ul style="list-style-type: none"> <li>-creates equivalent fractions labels a number line in fractional parts</li> </ul> <p><b>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</b></p>	<ul style="list-style-type: none"> <li>-Convert 0.25 to fraction form</li> <li>-Convert <math>1\frac{1}{4}</math> to decimal form</li> <li>-Create equivalent fractions so that <math>\frac{1}{4}</math> and <math>\frac{1}{8}</math> have common denominators</li> </ul>
	1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Strand: Computation		
Topic: 5.C.5 & 5.AT.3 - Multiply Fractions		
Level: Fifth Grade		
	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	Sample Tasks
Score 4.0		<p>-To make a quilt, Emily needs the following amounts of fabric: 2 5/8 yards of plaid, 2 1/3 yards of gingham and 1 5/6 yards of calico. How many total yards of fabric will she need to make 3 quilts?</p> <p>-Circle all the correct answers to the following problem.</p> <p style="text-align: center;"><math>3 \frac{3}{4} \times 4 \frac{5}{7} =</math></p> <p>a.) 12 15/28    b.) 8 4/11    c.) 17 19/28    d.) 495/28</p>
	3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.	Simplifies final answer by reducing fraction, changing improper to mixed if possible.
Score 3.0	<p><b>The student:</b></p> <ul style="list-style-type: none"> <li>-multiply a fraction by another fraction or a fraction by a whole number</li> <li>-recognizes that a whole number would be placed over the denominator of 1 before multiplying</li> <li>-solves real world problems involving multiplication of fractions and mixed numbers</li> </ul> <p><b>The student exhibits no major errors or omissions.</b></p>	<p>-After lunch, 1/4 of Jeff's class wanted to go fishing. Jeff had 24 students in his classroom. How many wanted to go fishing?</p> <p>-The dog park is 1 7/8 miles wide. It is 2 2/3 times as long as it is wide. How long is the dog park?</p> <p>-Use visual fraction models or equations</p>
	2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	<p><b>There are no major errors or omissions regarding the simpler details and processes as the student:</b></p> <p><b>Recognizes or recalls specific terminology, such as:</b></p> <ul style="list-style-type: none"> <li>-product, numerator, denominator</li> </ul> <p><b>Performs basic processes, such as:</b></p> <ul style="list-style-type: none"> <li>-Interprets a whole number as a fraction</li> <li>-Converts a mixed number to an improper fraction</li> <li>-Demonstrates fluency (<i>fluency is flexibility, being able to use a strategy to determine an unknown fact, accuracy, demonstrating the correct answer, efficiency, being able to answer within 5 seconds</i>) of basic multiplication facts</li> <li>-understanding of multiplication facts</li> </ul> <p><b>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</b></p>	<p><math>1/2 \times 1/3 =</math></p> <p><math>1/5 \times 1/4 =</math></p> <p>-Lots of people came to watch the space shuttle land. Of these people, 2/7 were fifth graders from California and 6/8 were fifth graders from Indiana. What fraction of the people were fifth graders?</p>
	1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

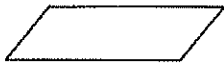

Final 18-19 Math Scales

Strand: Computation		
Topic: 5.C.7 & 5.AT.4 - Divide Fractions		
Level: Fifth Grade		
Score	Description	Sample Tasks
Score 4.0	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	-The student can apply 3.0 level skills and divide using mixed and whole numbers.  -Solve multi-step problems involving division of fractions
	3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	The student:  -Can divide a unit fraction by a non-zero whole number and divide a whole number by a unit fraction. -Divide a fraction by a fraction -Shows quotients as fractions and mixed numbers -Connects dividing by a fraction to multiplication	(ex:) Kyra has homework in 4 classes. If she did $\frac{1}{3}$ of her homework for each class every night, how many nights would it take her to finish her homework? Write a number sentence and solve. Demonstrate the solution using a model.  
	2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	There are no major errors or omissions regarding the simpler details and processes as the student:  Recognizes or recalls specific terminology, such as: division, expression, fraction, numerator, denominator  Performs basic processes, such as: -names the reciprocal of any fraction, including improper fractions, and mixed numbers -expresses how fractions are related to division  However, the student exhibits major errors or omissions regarding the more complex ideas and processes.	-Write a division expression for the following fractions: $\frac{7}{8}$ , $\frac{9}{15}$  -Write each division expression as a fraction: 9 divided by 11, 7 divided by 3  -What is the reciprocal of $4\frac{1}{3}$ ?
	1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

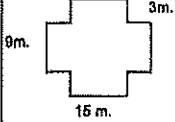

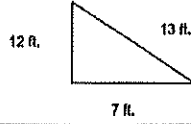
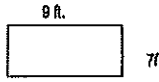


Final 18-19 Math Scales

Strand: Computation		
Topic: 5.C.4 & 5.AT.2 - Add and Subtract Fractions		
Level: Fifth Grade		
	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	Sample Tasks
Score 4.0		<p>-Gavin recorded the distances each athlete jumped in Tuesday's track meet. Athlete A: <math>5 \frac{1}{4}</math> feet      Athlete B: <math>3 \frac{2}{4}</math> feet</p> <p>Gavin claims that Athlete B jumped <math>2 \frac{1}{4}</math> feet farther than Athlete A because the difference between the whole numbers is 2 and the difference between the numerators is 1. Explain why Gavin's reasoning is incorrect. What is the correct difference in, in feet, between the distance Athlete A jumped and the distance Athlete B jumped?</p>
	3.5   In addition to score 3.0 performance, in-depth inferences and applications with partial success.	Simplifies final answer by reducing fraction, changing to proper to mixed if possible.
Score 3.0	<p><b>The student:</b> -Adds and subtracts fractions with unlike denominators by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators in accordance to a real-world problem.</p> <p><b>The student exhibits no major errors or omissions.</b></p>	<p>-Tyler mowed lawns in the summer. On Monday, he mowed <math>\frac{4}{8}</math> of the neighbor's lawn. On Tuesday, he mowed <math>\frac{6}{16}</math> of the same lawn. How much of the lawn did Tyler mow in total? How much of the lawn is left to mow?</p> <p>-Subtraction with regrouping. Katie walked <math>2 \frac{2}{3}</math> miles to exercise after school. The next day she walked 5 miles. How much farther did she walk?</p>
	2.5   No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	Student understands how to find common denominators, but does not carry the process over to the numerators or only changes one numerator, etc.
Score 2.0	<p><b>There are no major errors or omissions regarding the simpler details and processes as the student:</b></p> <p>Recognizes or recalls specific terminology, such as: -sum, difference, numerator, denominator, in all, left, together, total, remaining, multiples and Performs basic functions such as the following: -Adds and subtracts fractions with like denominators -Finds a common denominator between two numbers -Converts between improper fractions and mixed numbers -Finds equivalent fractions</p> <p><b>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</b></p>	Annie walked her dog $\frac{2}{8}$ miles from her house to the dog park, and then $\frac{5}{8}$ miles back home. How many total miles did she walk?
	1.5   Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5   With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Strand: Geometry		
Topic: 5.G.2 Identify and classify polygons		
Level: Fifth Grade		
		Sample Tasks
Score 4.0	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	-After drawing the polygon to the given specifications, classify the polygon and explain why you classified it in that way. -When given one measure of a quadrilateral, find the possible combinations for the remaining angles. -Decide whether statements are always, sometimes, or never true and provide drawings for each statement.
	3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<b>The student:</b> -classifies triangles and determines the measure of its angles using a protractor -classifies polygons by providing all possible names -classifies polygons in a hierarchy based on properties and explain  <b>The student exhibits no major errors or omissions.</b>	-Classify a triangle by side and angle, and identify the measure of its angles. -List all of the possible names for the following polygon. -When given different groupings of polygons, explain which polygon does not belong and why. Identify where the polygon should be placed and why.
	2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	<b>There are no major errors or omissions regarding the simpler details and processes as the student:</b>  <b>Recognizes or recalls specific terminology, such as:</b> -polygon, triangle, quadrilateral, pentagon, hexagon, octagon, rhombus, trapezoid, parallelogram, rectangle, square, triangles (scalene, isosceles, equilateral, acute, obtuse, right), parallel, perpendicular, protractor, vertex  <b>Performs basic functions such as the following:</b> -Classifies angles and simple polygons -Draws parallel and perpendicular lines  <b>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</b>	-Identify this polygon in two different ways:   -Classify this triangle by circling one of the following terms   Acute Obtuse Right
	1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Strand: Computation		
Topic: 5.C.9 - Order of Operations		
Level: Fifth Grade		
		Sample Tasks
Score 4.0	In addition to Score 3.0, In-depth Inferences, applications, and analysis indicate an extension of learning.	Find the mistake in evaluating the expression $4 + 2 \times 6 + (10 \div 2) = 41$ Evaluate the expression $[3 \text{ squared} + (8 \times 2) - 4] \times$ Use the symbols +, -, x, and ÷ to make the number sentence true.  $(3 \square 5) \square 4 \square (14 \square 2) = 12$
	3.5 In addition to score 3.0 performance, In-depth Inferences and applications with partial success.	
Score 3.0	The student: -evaluate and solve expressions requiring no more than 4 steps. -writes a number sentence to solve real world problems -determines if two expressions are equivalent  The student exhibits no major errors or omissions.	-Evaluate: $7^2 + (8 - 2) - 13 = \underline{\hspace{2cm}}$  -Mr. Smith's 5th grade class went on a field trip to hear the symphony perform. Their seats were grouped in the following ways: 2 groups of 3 seats; 3 groups of 4 seats; 4 groups of 2 seats, and 1 seat (for Mr. Smith). Write a number sentence to calculate how many students went on the field trip and solve.  -Solve the following expression: $2^3 + (4 \times 3 - 4) = \underline{\hspace{2cm}}$ -Are the following expressions equivalent to the expression above? Y or N ____ $6^2 - (10 \times 2) =$ $\underline{\hspace{2cm}} 54 + 6 \times 4 - (2 + 1) =$
	2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	There are no major errors or omissions regarding the simpler details and processes as the student:  Recognizes or recalls specific terminology, such as: -brackets, parenthesis, expressions, evaluate, variables Performs basic processes, such as: -Applies order of operations in a simple 2 step problem -Adds, subtracts, multiplies and divides whole numbers  However, the student exhibits major errors or omissions regarding the more complex ideas and processes.	Evaluate $5 - 2 \times 1 =$
	1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
	0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Strand: Measurement	
Topic: 5.M.2 & 5.M.3 - Area of Polygons	
Level: Fifth Grade	
Score 4.0	<p>In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.</p> <p style="text-align: right;">Sample Tasks</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Find the area of the figure</p> <p>Mrs. Smith has 5 triangular flower boxes around her house. If the boxes are isosceles in shape with a base of 7 in, side measurements of 5 in, and a height of 4 in, what is the total perimeter of the flower boxes?</p> </div> </div>
Score 3.0	<p>3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.</p> <p><b>The student:</b></p> <ul style="list-style-type: none"> <li>-Applies the area for rectangles using fractional side lengths</li> <li>-Uses the correct formulas to find the area of parallelograms, triangles, and trapezoids.</li> <li>-Applies the correct formulas for perimeter and area to solve real world mathematical problems</li> </ul> <p><b>The student exhibits no major errors or omissions.</b></p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Find the area of the rectangle</p> </div> </div> <div style="display: flex; align-items: center; margin-top: 10px;">  <div style="margin-left: 20px;"> <p>Find the area of the triangle.</p> </div> </div>
Score 2.0	<p>2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.</p> <p><b>There are no major errors or omissions regarding the simpler details and processes as the student can:</b></p> <p><b>Recognizes or recalls specific terminology, such as:</b></p> <ul style="list-style-type: none"> <li>-area, polygon, formula</li> </ul> <p><b>Performs basic processes, such as:</b></p> <ul style="list-style-type: none"> <li>-Demonstrates understanding of multiplication facts</li> <li>-Understands that a square is composed of four equal sides</li> <li>-Applies the formula for squares and rectangles</li> </ul> <p><b>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</b></p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Find the area of the rectangle.</p> </div> </div>
Score 1.0	<p>1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.</p> <p>With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.</p>
Score 0.5	<p>0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.</p>
Score 0.0	<p>Even with help, no understanding or skill demonstrated.</p>

Strand: Data Analysis & Statistics																
Topic: 5.DS.2 - Mean, Median, Mode & Range																
Level: Fifth Grade																
Score 4.0	<p>In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.</p> <p><b>Sample Tasks</b></p> <p>Julie has taken a total of 5 tests, but she only remembers 4 of her scores. They were: 89, 74, 92, and 80. She knows that her mean test scores is 79. What is her missing score?</p> <p><b>Number of Pieces of Jewelry Sold</b></p> <table border="1"> <tr> <td>21</td> <td>9</td> <td>13</td> <td>9</td> <td>7</td> </tr> <tr> <td>12</td> <td>12</td> <td>15</td> <td>9</td> <td>22</td> </tr> <tr> <td>8</td> <td>25</td> <td>8</td> <td>17</td> <td>11</td> </tr> </table> <p>-The table shows the number of pieces of jewelry that Sarah sold during several craft fairs. PART A – Find the mean, median, mode and range of the data. PART B – Explain which value she could use to predict how many pieces of jewelry might be sold each day.</p>	21	9	13	9	7	12	12	15	9	22	8	25	8	17	11
21	9	13	9	7												
12	12	15	9	22												
8	25	8	17	11												
Score 3.0	<p>3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.</p> <p>The student: - Finds mean, median, mode and range when given a set of data. - Adds data to a line plot and use it to analyze mean, median, mode and range. - Describes &amp; calculates how the mean, median, mode and range changes when the set of data changes. - Calculates mean, median, mode and range when given a set of data in a real world situation.</p> <p>The student exhibits no major errors or omissions.</p> <p>-Identify the mean, median, and mode and range for the set of data. 13, 14, 17, 14, 16, 19</p> <p><b>Second Grade Heights</b></p> <p>Two more students join the 2<sup>nd</sup> grade. One is 54 in. &amp; one is 51 in. Place an X on the line plot for each student and find the mean, median, and mode.</p> <p>Day: Monday Tuesday Wednesday Thursday Friday Degrees Fahrenheit: 80 80 82 84 78</p> <p>- What are the mean, median, mode and range for the 5 day weather forecast? - If the data for Friday were removed from the table, what would the mean, median, mode and range be?</p>															
Score 2.0	<p>2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.</p> <p>There are no major errors or omissions regarding the simpler details and processes as the student: Recognizes or recalls specific terminology, such as: - mean, median, mode, range, measures of center, frequency Performs basic processes, such as: - Describes how to find mean, median, mode Finds mean, median, mode in a step by step process</p> <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p> <p>Match mean, median, mode and range to each description. -Sum of all numbers, divided by the number of numbers in the set is _____.</p> <p>Solve each step below. Step 1 – Add all numbers: <math>2 + 3 + 4 + 2 + 7 + 9 =</math> _____ Step 2 – Divide the sum by 6 = _____ What are these the steps for? _____</p>															
Score 1.0	<p>1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.</p> <p>With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.</p>															
Score 0.5	<p>0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.</p>															
Score 0.0	<p>Even with help, no understanding or skill demonstrated.</p>															

Strand: Algebraic Thinking		
Topic: 5.AT.6 & 5.AT.7 Coordinate Graphs		
Level: Fifth Grade		
Score	Description	Sample Tasks
Score 4.0	In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.	<p><b>Sample Tasks</b></p> <p>-A toy company is testing R2D2 robots. The employees of the company marked a grid on the floor and set R2D2 at (2, 4). They programmed R2D2 to walk 2 yards east and 3 yards north each minute. What will R2D2's location be after 6 minutes?</p> <p>-Label the graph and plot R2D2's starting position. Then plot and label R2D2's position at the end of each of the first 4 minutes.</p>
3.5	In addition to score 3.0 performance, in-depth inferences and applications with partial success.	
Score 3.0	<p><b>The student:</b></p> <ul style="list-style-type: none"> <li>-graphs and names points with whole number coordinates on a coordinate plane</li> <li>-explains how coordinates relate the point to the distance from the origin &amp; a starting location on each axis.</li> <li>-names the two axes and the coordinates that correspond (e.g., x-axis, x-coordinate and horizontal)</li> <li>-represents real world problems &amp; equations by graphing ordered pairs in the first quadrant of the coordinate plane, and interprets coordinate values of points in the context of the situation.</li> </ul> <p>The student exhibits no major errors or omissions.</p>	<p>-Point C is located at (10, 3) and Point D is located at (4, 3). What is the horizontal distance between the two points? Explain.</p> <p>Use the coordinate plane below to answer questions.</p> <p>21.) What object is at point (2, -1)? _____</p> <p>22.) Start at the hot air balloon. What object is 3 units left and 5 units down. _____</p> <p>-Sarah can hike 3 miles in an hour. At that speed, how far would she walk in 5 hours? Complete a table, plot the points on a grid, and draw a line to show the pattern.</p>
2.5	No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.	
Score 2.0	<p>There are no major errors or omissions regarding the simpler details and processes as the student:</p> <p>Recognizes or recalls specific terminology, such as:</p> <ul style="list-style-type: none"> <li>-x-coordinate, y-coordinate, origin, x-axis, y-axis</li> </ul> <p>Performs basic processes, such as:</p> <ul style="list-style-type: none"> <li>-Labels parts of a coordinate plane</li> <li>-Labels both positive and negative sides of a number line</li> </ul> <p>However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>	<p>-Label parts of coordinate grid</p> <p>-Utilize needed vocabulary</p>
1.5	Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.	
Score 1.0	With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.	
0.5	With help, a partial understanding of the 2.0 content, but not the 3.0 content.	
Score 0.0	Even with help, no understanding or skill demonstrated.	

Final 18-19 Math Scales

Strand: Algebraic Thinking	
Topic: 5.AT.8 - Expressions	
Level: Fifth Grade	
	Sample Tasks
<p><b>Score 4.0</b></p> <p>In addition to Score 3.0, in-depth inferences, applications, and analysis indicate an extension of learning.</p>	<p>Linda was selling tickets for the school play. She sold 10 more adult tickets than children tickets and she sold twice as many senior tickets as children tickets.</p> <p>-Write an expression to represent the number of adult tickets sold.                      -Adult tickets cost \$5, children's tickets cost \$2 and senior tickets cost \$3. Linda made \$700. Write an equation to represent the total ticket sales.                      - How many children's tickets were sold for the play?</p>
<p><b>3.5</b> In addition to score 3.0 performance, in-depth inferences and applications with partial success.</p>	
<p><b>Score 3.0</b></p> <p>The student:                      defines and uses up to two variables to write linear expressions that arise from real-world problems.                      evaluates expressions for given values.                      The student exhibits no major errors or omissions.</p>	<p>-Gary is buying calculators and notebooks for school. Each calculator costs \$7 and each notebook costs \$2. Gary is not sure how many calculators and notebooks he will buy.                      -write an expression to represent the total cost of Gary's purchase. Be sure to define your variables.                      -How much will it cost if Gary buys 12 calculators and 25 notebooks?</p> <p>-Define the variable and write an expression to show:                      -Sally's time decreased by 7 minutes                      -The cost of shoes increased by \$4                      -The product of the number lunches purchased and the cost of the lunches (\$3)</p>
<p><b>2.5</b> No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.</p>	
<p><b>Score 2.0</b></p> <p>There are no major errors or omissions regarding the simpler details and processes as the student:                      Recognizes or recalls specific terminology, such as:                      -expression, evaluate, ordered pairs, variable, decreased, increased, product, quotient, sum, difference                      Performs basic processes, such as:                      Adds, subtracts, multiplies and divides accurately Evaluates expressions when given the value of the variable.                      However, the student exhibits major errors or omissions regarding the more complex ideas and processes.</p>	<p>Mike ordered some t-shirts online. The t-shirts came in 3 identical boxes. Mike got 87 t-shirts in all. Which equation, when solved, will tell how many t-shirts were in each box?  <math>3 \times f = 87</math>  <math>3 + 87 = f</math>  <math>f + 87 = 3</math>  <math>3 - f = 87</math></p>
<p><b>1.5</b> Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.</p>	
<p><b>Score 1.0</b></p> <p>With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.</p>	
<p><b>0.5</b> With help, a partial understanding of the 2.0 content, but not the 3.0 content.</p>	
<p><b>Score 0.0</b></p> <p>Even with help, no understanding or skill demonstrated.</p>	