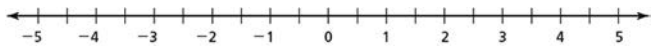
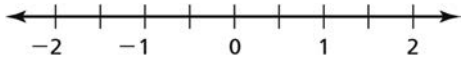
Name _____ Date _____

Evidence-Based Scale Worksheets

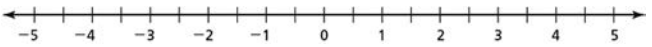
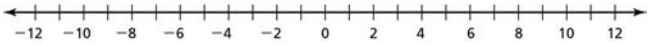
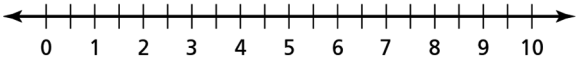
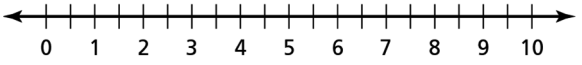
Number Sense and Operations
MA.6.NSO.1.1 Extend previous understanding of numbers to define rational numbers. Plot, order and compare rational numbers.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to plot, order, and compare rational numbers.	
3	**I understand the entire standard.** • Plot and order rational numbers. • Compare rational numbers.	Use the number line to order the numbers from least to greatest. **a.** $-2.5, 1, -4.25, 3.75, 0, -1.5$  **b.** $75\%, -\frac{4}{5}, 1.5, \frac{7}{8}$  **c.** Complete each statement with <, >, or =. 7.5% ☐ 0.75% 0.2 ☐ 0.3% -0.6 ☐ $\frac{3}{5}$

Name _____ Date _____

MA.6.NSO.1.1 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Plot and order integers. • Compare integers.	Use the number line to order the numbers from least to greatest. **a.** $-2, 1, -4, 3, 0, -5$  **b.** $7, -10, 9, -8, -12, 11$  **c.** Complete each statement with <, >, or =. $75 \square 80$ $-30 \square -3$ $22 \square -23$
1	**I understand the basic skills needed to begin learning this standard.** • Plot and order positive rational numbers.	Use the number line to order the numbers from least to greatest. **a.** $3.5, 9, 5.8, 2, 8.9$  **b.** $6, \frac{7}{4}, \frac{4}{5}, 8\frac{1}{2}, 7$ 

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations

MA.6.NSO.1.2 Given a mathematical or real-world context, represent quantities that have opposite direction using rational numbers. Compare them on a number line and explain the meaning of zero within its context.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to represent quantities that have opposite direction using rational numbers and how to compare opposite rational numbers on a number line. • Teach someone else the meaning of zero in a real-world context.	
3	**I understand the entire standard.** • Given a real-world context, represent quantities that have opposite direction using rational numbers. Compare them on a number line and explain the meaning of zero within its context.	An investment account had a loss of $\$500$ in May, a $\$0$ change in value in June, and a gain of $\$500$ in July. **a.** Write a number that represents the change in value for May and July. **b.** Use a number line to compare the meaning of the value for May and July. **c.** What does $\$0$ mean in this context?

Name_____ Date _____

MA.6.NSO.1.2 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Given a mathematical context, represent quantities that have opposite direction using rational numbers.	In the first round of a game, you lost 10 points and your friend gained 10 points. Write an integer that represents each situation.
1	**I understand the basic skills needed to begin learning this standard.** • Write the opposite of a rational number.	Write the opposite of the number. **a.** 0.85 **b.** $-3\frac{1}{2}$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations

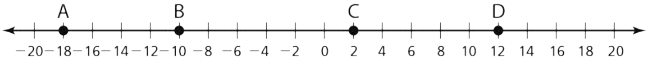
MA.6.NSO.1.3 Given a mathematical or real-world context, interpret the absolute value of a number as the distance from zero on a number line. Find the absolute value of rational numbers.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to interpret and find the absolute value of numbers in a real-world and a mathematical context.	
3	**I understand the entire standard.** • Find and interpret the absolute value of numbers in a real-world context.	The table shows the temperatures of four days in a city. **Day** / **Temperature** Monday: –3°C Tuesday: 2°C Wednesday: 5°C Thursday: –7°C **a.** Interpret the meaning of each temperature in relation to freezing (0°C). **b.** On which day was the temperature closest to freezing (0°C)?

Name_____ Date _____

MA.6.NSO.1.3 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Find and interpret the absolute value of numbers in a mathematical context.	Which point on the number line has the greatest absolute value? Explain your reasoning. 
1	**I understand the basic skills needed to begin learning this standard.** • Find the distance between two points on a number line.	Find the distance between the values on a number line. **a.** 3 and 9 **b.** 15 and 28 **c.** 40 and 80

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.1.4 Solve mathematical and real-world problems involving absolute value, including the comparison of absolute value.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Write a real-world problem that involves comparing absolute values.	
3	**I understand the entire standard.** • Solve a real-world problem involving absolute value, including the comparison of the absolute value.	The table shows the change in the value of a bank account after several withdrawals or deposits. **Transaction** / **Change (dollars)** 1 / 22 2 / 10 3 / -24 4 / -18 **a.** Which transaction has the least effect on the balance of the account? **b.** Which transaction(s) represent(s) a withdrawal greater than $\$20$?

Name_____ Date _____

MA.6.NSO.1.4 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Solve a mathematical problem involving absolute value, including the comparison of the absolute value.	Order the values from least to greatest. $\lvert -1\rvert, \lvert 3\rvert, \lvert -2\rvert, \lvert 4\rvert$
1	**I understand the basic skills needed to begin learning this standard.** • Find the absolute value.	Find the absolute value. **a.** $\lvert -9\rvert$ **b.** $\lvert 25\rvert$ **c.** $\lvert 0\rvert$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.2.1 Multiply and divide positive multi-digit numbers with decimals to the thousandths, including using a standard algorithm with procedural fluency.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to multiply and divide positive multi-digit numbers with decimals to the thousandths.	
3	**I understand the entire standard.** • Multiply and divide multi-digit numbers with decimals to the thousandths.	Multiply or divide. **a.** 2.75×1.43 **b.** $3.69 \div 2.25$ **c.** 20.48×2.1 **d.** $22.632 \div 1.38$

Name_____ Date _____

MA.6.NSO.2.1 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Multiply multi-digit numbers where one factor is a decimal. • Divide multi-digit numbers where the dividend or the divisor is a decimal.	Multiply or divide. **a.** 32×8.7 **b.** $54 \div 2.4$ **c.** 18.24×16 **d.** $36.48 \div 6$
1	**I understand the basic skills needed to begin learning this standard.** • Multiply and divide whole numbers.	Multiply or divide. **a.** 84×105 **b.** $996 \div 12$ **c.** 97×63 **d.** $13{,}160 \div 28$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.2.2 Extend previous understanding of multiplication and division to compute products and quotients of positive fractions by positive fractions, including mixed numbers, with procedural fluency.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to multiply and divide positive fractions and positive mixed numbers.	
3	**I understand the entire standard.** • Multiply and divide positive fractions and mixed numbers.	Multiply or divide. **a.** $\frac{2}{5} \times \frac{3}{4}$ **b.** $3\frac{2}{9} \times 4\frac{1}{10}$ **c.** $\frac{7}{10} \div \frac{5}{7}$ **d.** $4\frac{2}{3} \div 3\frac{2}{5}$

Name_____ Date _____

MA.6.NSO.2.2 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Multiply a positive fraction or mixed number by a whole number. • Divide a positive fraction or mixed number by a whole number.	Multiply or divide. **a.** $6 \times \frac{3}{10}$ **b.** $5\frac{1}{3} \times 4$ **c.** $10 \div \frac{3}{4}$ **d.** $8\frac{1}{3} \div 5$
1	**I understand the basic skills needed to begin learning this standard.** • Multiply and divide whole numbers.	Multiply or divide. **a.** 10×15 **b.** 13×24 **c.** $28 \div 7$ **d.** $80 \div 5$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations

MA.6.NSO.2.3 Solve multi-step real-world problems involving any of the four operations with positive multi-digit decimals or positive fractions, including mixed numbers.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Create a multi-step real-world problem using any of the four operations and positive decimals. • Create a multi-step real-world problem using any of the four operations and positive fractions or mixed numbers.	
3	**I understand the entire standard.** • Solve a multi-step word problem with positive decimals. • Solve a multi-step word problem with positive fractions and mixed numbers.	**a.** A gift card for a coffee shop has a starting of balance of $\$50$. You buy a coffee every day for $\$3.35$ and some days you buy a bagel with cream cheese for $\$2.95$. After 10 days, the remaining balance on your gift card is $\$1.75$. How many bagels did you buy? **b.** You have 2 bird feeders that hold $5\frac{5}{12}$ cups of seeds. You have a third bird feeder that holds $4\frac{1}{2}$ cups of seeds. One scoop of seeds holds $1\frac{1}{6}$ cups of seeds. How many scoops of seeds are needed to fill all three bird feeders?

Name_____ Date _____

MA.6.NSO.2.3 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Make a plan to solve real-world problems involving decimals, fractions, or mixed numbers.	Understand the problem. Make a plan. How will you solve? Each day, you read for $\frac{1}{2}$ of an hour in the morning and $\frac{3}{4}$ of an hour in the evening. How many hours do you read in a week?
1	**I understand the basic skills needed to begin learning this standard.** • Perform operations with decimals, fractions, and mixed numbers.	Find the value. **a.** $2.25 + 1.5$ **b.** $1\frac{3}{4} - \frac{1}{2}$ **c.** $\frac{4}{9} \times \frac{3}{5}$ **d.** $22.36 \div 4.3$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.3.1 Given a mathematical or real-world context, find the greatest common factor and least common multiple of two whole numbers.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to find the greatest common factor and the least common multiple of two whole numbers in a mathematical problem and a real-world problem.	
3	**I understand the entire standard.** • Find the greatest common factor of two whole numbers in a real-world problem. • Find the least common multiple of two whole numbers in a real-world problem.	**a.** You have 40 scarves and 55 hats to make identical donation bags. You make the greatest number of donation bags with no clothing left over. How many scarves and hats are in each donation bag? **b.** Plane A lands at the same airport every 14 hours. Plane B lands at the same airport as Plane A every 4 hours. Both planes just landed at the airport. In how many hours will both planes land at the same airport at the same time again?

Name_____ Date _____

MA.6.NSO.3.1 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Find the greatest common factor of two whole numbers. • Find the least common multiple of two whole numbers.	**a.** Find the greatest common factor of 24 and 42. **b.** Find the least common multiple of 12 and 16.
1	**I understand the basic skills needed to begin learning this standard.** • Write the prime factorization of a whole number.	Write the prime factorization of 28.

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.3.2 Rewrite the sum of two composite whole numbers having a common factor, as a common factor multiplied by the sum of two whole numbers.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to rewrite the sum of two composite whole numbers as a common factor multiplied by the sum of two whole numbers.	
3	**I understand the entire standard.** • Rewrite the sum of any two composite whole numbers as a common factor multiplied by the sum of two whole numbers.	Factor the expression using the GCF. **a.** $18 + 24$ **b.** $144 + 216$

Name_____ Date _____

MA.6.NSO.3.2 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Find the greatest common factor of two whole numbers.	Find the greatest common factor. **a.** 8 and 12 **b.** 18 and 42
1	**I understand the basic skills needed to begin learning this standard.** Use the Distributive Property to evaluate expressions.	Use the Distributive Property to evaluate the expression. **a.** $5(6 + 1)$ **b.** $3(9 + 8)$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.3.3 Evaluate positive rational numbers and integers with natural number exponents.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to evaluate positive rational numbers and integers with natural number exponents.	
3	**I understand the entire standard.** • Evaluate positive rational numbers with natural number exponents. • Evaluate integers with natural number exponents.	Evaluate the expression. **a.** $(1.4)^3$ **b.** $\left(1\frac{1}{3}\right)^4$ **c.** $(-5)^4$ **d.** 2^5

Name_____ Date _____

MA.6.NSO.3.3 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Evaluate nonnegative integers with natural number exponents.	Evaluate the expression. **a.** 6^3 **b.** 0^4 **c.** 7^2
1	**I understand the basic skills needed to begin learning this standard.** • Multiply positive rational numbers.	Evaluate the expression. **a.** $4 \times 4 \times 4 \times 4 \times 4$ **b.** $\frac{3}{10} \times \frac{3}{10} \times \frac{3}{10}$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.3.4 Express composite whole numbers as a product of prime factors with natural number exponents.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to write any whole number as a product of prime factors with rational exponents.	
3	**I understand the entire standard.** • Write any whole number as a product of prime factors with natural number exponents.	Write the prime factorization of the number. **a.** 28 **b.** 54 **c.** 150 **d.** 252

Name_____ Date _____

MA.6.NSO.3.4 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Find the factor pairs of a number.	List the factor pairs of the number. **a.** 66 **b.** 69 **c.** 82
1	**I understand the basic skills needed to begin learning this standard.** • Write products of repeated factors as powers.	Write the product as a power. **a.** $2 \times 2 \times 2$ **b.** 5×5 **c.** $3 \times 3 \times 3 \times 3$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.3.5 Rewrite positive rational numbers in different but equivalent forms including fractions, terminating decimals and percentages.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to write positive rational numbers in different but equivalent forms, including fractions, terminating decimals, and percents.	
3	**I understand the entire standard.** • Write positive rational numbers in different but equivalent forms, including fractions, terminating decimals, and percents.	**a.** Write $3\frac{3}{25}$ as a decimal and as a percent. **b.** Write 0.22 as a fraction and as a percent. **c.** Write 300.5% as a mixed number and as a decimal.

Name_____ Date _____

MA.6.NSO.3.5 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Write a decimal as a percent. • Write a percent as a decimal.	**a.** Write 0.375 as a percent. **b.** Write 64% as a decimal.
1	**I understand the basic skills needed to begin learning this standard.** • Write equivalent fractions.	Rewrite the fraction with a denominator of 100. **a.** $\frac{3}{10}$ **b.** $\frac{2}{5}$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.4.1 Apply and extend previous understandings of operations with whole numbers to add and subtract integers with procedural fluency.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Write a real-world problem that involves adding or subtracting integers.	
3	**I understand the entire standard.** • Add and subtract integers.	Add or subtract. **a.** $-7 + 24$ **b.** $28 + (-33)$ **c.** $19 + (-41)$ **d.** $16 - 32$ **e.** $-18 - 40$ **f.** $-14 - (-43)$

Name_____ Date _____

MA.6.NSO.4.1 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Use a number line to find sums and differences of integers.	Use a number line to find the sum or difference. **a.** $-15 + (-2)$ **b.** $-7 + 6$ **c.** $16 - (-8)$ **d.** $-5 - (-3)$
1	**I understand the basic skills needed to begin learning this standard.** • Add and subtract whole numbers.	Add or subtract. **a.** $45 + 38$ **b.** $29 + 73$ **c.** $48 - 32$ **d.** $60 - 19$

Name _____ Date _____

Evidence-Based Scale Worksheets

Number Sense and Operations
MA.6.NSO.4.2 Apply and extend previous understandings of operations with whole numbers to multiply and divide integers with procedural fluency.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach someone else how to multiply or divide integers and how to know when the product or quotient is positive or negative using the numbers in the problem.	
3	**I understand the entire standard.** • Multiply and divide integers.	Multiply or divide. **a.** -4×18 **b.** $12 \times (-11)$ **c.** $-13 \times (-5)$ **d.** $-72 \div 6$ **e.** $180 \div (-12)$ **f.** $-288 \div (-8)$

Name_____ Date _____

MA.6.NSO.4.2 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Use a number line or integer counters to find the product or quotient of integers.	Use a number line or integer counters to find the product or quotient. **a.** $2 \times (-7)$ **b.** $-5 \times (-3)$ **c.** $12 \div (-4)$ **d.** $-20 \div (-10)$
1	**I understand the basic skills needed to begin learning this standard.** • Multiply and divide whole numbers.	Multiply or divide. **a.** 19×15 **b.** 27×8 **c.** $438 \div 6$ **d.** $247 \div 13$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning

MA.6.AR.1.1 Given a mathematical or real-world context, translate written descriptions into algebraic expressions and translate algebraic expressions into written descriptions.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Create a word problem where a written description needs to be translated into an algebraic expression.	
3	**I understand the entire standard.** • Given real-world context, translate written descriptions into algebraic expressions • Given real-world context, translate algebraic expressions into written descriptions.	**a.** The length of a window ℓ is four centimeters less than the width w. What is an expression that represents the perimeter scenario? **b.** A baseball team receives a discount on each hat purchased. The team buys 14 hats for a total of $14(d - 3)$ dollars. How much does the team pay for each hat?

Name _____ Date _____

MA.6.AR.1.1 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Given mathematical context, translate written descriptions into algebraic expressions. • Given mathematical context, translate algebraic expressions into written descriptions.	**a.** What is the expression that represents twice the difference of eight and three times a number x? **b.** How can the expression $\frac{1}{2}x - 2(x + 3)$ be represented in a written description?
1	**I understand the basic skills needed to begin learning this standard.** • Identify words and phrases that indicate addition, subtraction, multiplication, and division.	Write each phrase as an expression. **a.** the product of 18 and 7 **b.** 19 more than 68 **c.** the difference of 34 and 11 **d.** the quotient of 42 and 7

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning

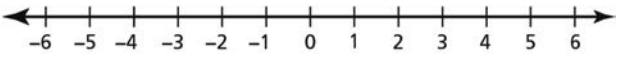
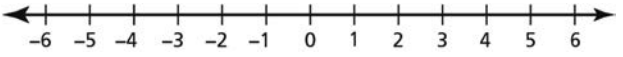
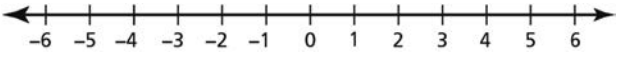
MA.6.AR.1.2 Translate a real-world written description into an algebraic inequality in the form of $x > a$, $x < a$, $x \geq a$ or $x \leq a$. Represent the inequality on a number line.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Describe a real-life situation that can be represented by an inequality.	
3	**I understand the entire standard.** • Write and graph an algebraic inequality to represent a real-life situation.	Translate each description into an algebraic inequality. Graph the inequality on a number line. **a.** To have school cancelled, the temperature must be less than 0°F. **b.** To win a game, you must have at least 400 points.

Name _____ Date _____

MA.6.AR.1.2 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Represent an inequality on a number line.	Graph each inequality on the number line. **a.** $a < -2$  **b.** $b \geq 3$  **c.** $c \leq 5$ 
1	**I understand the basic skills needed to begin learning this standard.** • Determine whether an inequality is true.	Determine which statements are true. **a.** $-10 > -8$ **b.** $-5 < -5$ **c.** $-4 \leq -4$ **d.** $-1 \geq -3$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning
MA.6.AR.1.3 Evaluate algebraic expressions using substitution and order of operations.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Use an algebraic expression to find the value of a variable.	The volume (in cubic inches) of a rectangular prism with length ℓ (in inches), width w (in inches), and height h (in inches) is represented by $\ell \times w \times h$. A rectangular prism has a volume of 300 cubic inches, a length of $12\frac{1}{2}$ inches, and a width of 6 inches. What is the height of the prism?
3	**I understand the entire standard.** • Evaluate a real world algebraic expression using substitution and order of operations.	A football player punts a football. The height (in feet) of the football after t seconds is represented by $-16t^2 + 64 + 3$. Find the height of the football after 0 and 1.5 seconds.

Name _____ Date _____

MA.6.AR.1.3 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Evaluate an algebraic expression using substitution and order of operations.	Evaluate the expression when $x = 3$ and $y = -1$. **a.** $16x - 4y$ **b.** $\frac{1}{3}x^2 + xy$
1	**I understand the basic skills needed to begin learning this standard.** • Evaluate numerical expressions.	Evaluate. **a.** $5(8 - 3) + 11$ **b.** $\frac{5(4+11)}{3}$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning
MA.6.AR.1.4 Apply the properties of operations to generate equivalent algebraic expressions with integer coefficients.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Apply the properties of operations to generate equivalent algebraic expressions with integer coefficients of a real-world problem.	The perimeter of the rectangle can be found by $2\ell + 2w$ where ℓ is the length and w is the width. What are two equivalent algebraic expression to represent the perimeter?
3	**I understand the entire standard.** • Apply the properties of operations to generate equivalent algebraic expressions.	Simplify the expression $9 + 2(x + 6) \times 1$.

Name _____ Date _____

MA.6.AR.1.4 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Identify properties of operations.	Tell which property the statement illustrates. **a.** $5 + (7 + x) = (5 + 7) + x$ **b.** $(12d + 6) = 6(2d + 1)$ **c.** $g \cdot 0 = 0$
1	**I understand the basic skills needed to begin learning this standard.** • Evaluate numerical expressions.	Evaluate the expressions. **a.** $2(8 - 3) + (-5)$ **b.** $3^2 - (-5)(3)$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning
MA.6.AR.2.1 Given an equation or inequality and a specified set of integer values, determine which values make the equation or inequality true or false.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Teach others how to identify when a solution is true for an equation. • Teach others how to identify when a solution is true for an inequality.	
3	**I understand the entire standard.** • Given an inequality, determine which values make it true.	Tell whether the given values are solutions of the inequality. **a.** $4 + p > 10; p = 5, 6, 7$ **b.** $3q \leq -12; p = -3, -4, -5$

Name _____ Date _____

MA.6.AR.2.1 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Given an equation, determine which values make it true.	Tell whether the given values are solutions of the equation. **a.** $\frac{36}{a} = 3; a = 12, 36, 108$ **b.** $b - 12 = 18; b = 6, 12, 30$
1	**I understand the basic skills needed to begin learning this standard.** • Compare numerical expressions.	Complete each statement with <, >, or =. **a.** $39 \div 3 \square 14$ **b.** $38 - 13 \square 25$ **c.** $3 \cdot 12 \square 35$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning

MA.6.AR.2.2 Write and solve one-step equations in one variable within a mathematical or real-world context using addition and subtraction, where all terms and solutions are integers.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Write a real-world problem for a one-step equation in one variable that requires addition and another that requires subtraction.	
3	**I understand the entire standard.** • Write and solve one-step equations in one variable within a real-world context using addition and subtraction.	Write an equation for each problem. Solve the equation. **a.** You have $\$35$. You now have $\$62$ after completing some chores. How much money did you receive? **b.** You gave 15 pencils to a friend. You are left with 31 pencils. How many pencils did you start with?

Name _____ Date _____

MA.6.AR.2.2 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Solve one-step equations using addition and subtraction.	Solve the equations. **a.** $x - 28 = -40$ **b.** $27 + y = 35$
1	**I understand the basic skills needed to begin learning this standard.** • Add and subtract integers fluently.	Add or subtract. **a.** $(-16) + 24$ **b.** $23 - 37$ **c.** $21 + (-15)$ **d.** $-34 - 28$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning

MA.6.AR.2.3 Write and solve one-step equations in one variable within a mathematical or real-world context using multiplication and division, where all terms and solutions are integers.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Write a real-world problem for a one-step equation in one variable that requires multiplication and another that requires division.	
3	**I understand the entire standard.** • Write and solve one-step equations in one variable within a real-world context using multiplication and division.	Write an equation for each problem. Solve the equation. **a.** How many box of cereal can you buy with $55 if each box costs $5? **b.** You and 3 friends at a restaurant share the bill evenly. Each person paid $17. What was the total bill?

Name _____ Date _____

MA.6.AR.2.3 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Solve one-step equations in using multiplication and division.	Solve the equations. **a.** $-12x = -48$ **b.** $\frac{y}{5} = -16$
1	**I understand the basic skills needed to begin learning this standard.** • Multiply and divide integers fluently.	Multiply or divide. **a.** $(-32) \div (-2)$ **b.** $18 \times (-21)$ **c.** $63 \div (-7)$ **d.** $(-34) \times (-20)$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning

MA.6.AR.2.4 Determine the unknown decimal or fraction in an equation involving any of the four operations, relating three numbers, with the unknown in any position.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Determine the unknown value in an equation that contains fractions and decimals.	Solve each equation. Write the solution as a fraction and a decimal. **a.** $\frac{7}{4} = x + 0.5$ **b.** $\frac{1}{2}y = 3.3$
3	**I understand the entire standard.** • Determine the unknown fraction in an equation.	Solve each equation. **a.** $\frac{11}{3} = x + \frac{2}{3}$ **b.** $\frac{2}{3}y = \frac{12}{5}$ **c.** $x - \frac{3}{8} = \frac{7}{8}$

Name _____ Date _____

MA.6.AR.2.4 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Determine the unknown decimal in an equation.	Solve each equation. **a.** $\frac{x}{1.1} = 5.7$ **b.** $3.8 + y = 7.9$ **c.** $12.3 = z - 1.25$
1	**I understand the basic skills needed to begin learning this standard.** • Add, subtract, multiply, and divide fractions.	Multiply or divide. **a.** $\frac{2}{3} \div \frac{1}{2}$ **b.** $\frac{4}{5} \times \frac{1}{4}$ **c.** $\frac{7}{12} + \frac{3}{4}$ **d.** $\frac{7}{16} - \frac{1}{4}$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning

MA.6.AR.3.1 Given a real-world context, write and interpret ratios to show the relative sizes of two quantities using appropriate notation: $\frac{a}{b}$, a to b, or a: b where $b \neq 0$.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Find a missing quantity in a ratio relationship.	You buy fertilizer for plants. The directions say to mix 1 teaspoon of fertilizer for every 4 pints of water. A container holds 12 pints of water. How many teaspoons of fertilizer do you need?
3	**I understand the entire standard.** • Given a real-world context, write and interpret ratios to show the relative sizes of two quantities using appropriate notation.	18 out of 30 students in a class have a dog. Write the ratios three different ways. Interpret the meaning of the ratios. **a.** What is the ratio of students who do not have a dog to the class? **b.** What is the ratio of students who have a dog to students who do not?

Name _____ Date _____

MA.6.AR.3.1 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Write ratios to show the relative sizes of two quantities using appropriate notation.	Write a ratio to compare the values. **a.** There are 3 blue glue sticks out of 5. **b.** You ride your bike 5 miles for every 1 mile your friend walks.
1	**I understand the basic skills needed to begin learning this standard.** • Simplify fractions.	Simplify each fraction. **a.** $\frac{64}{100}$ **b.** $\frac{72}{96}$ **c.** $\frac{42}{60}$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning

MA.6.AR.3.2 Given a real-world context, determine a rate for a ratio of quantities with different units. Calculate and interpret the corresponding unit rate.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Create a real-world problem to determine a rate for a ratio of quantities and find the unit rate.	
3	**I understand the entire standard.** • Given a real-world context, determine a rate for a ratio of quantities with different units. Calculate and interpret the corresponding unit rate.	A printer prints 150 sheets in 12 minutes. **a.** What is the ratio of the quantities? **b.** What is the unit rate? **c.** How many sheets can be printed in 18 minutes?

Name _____ Date _____

MA.6.AR.3.2 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Determine whether the rates are equivalent.	Determine whether the rates are equivalent. **a.** 75 points scored in 3 games 125 points scored in 5 games **b.** $\$38$ saved in 5 weeks $\$72$ saved in 10 weeks
1	**I understand the basic skills needed to begin learning this standard.** • Simplify fractions.	Simplify each fraction. **a.** $\frac{20}{15}$ **b.** $\frac{48}{3}$ **c.** $\frac{46}{10}$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning

MA.6.AR.3.3 Extend previous understanding of fractions and numerical patterns to generate or complete a two- or three-column table to display equivalent part-to-part ratios and part-to-part-to-whole ratios.

Circle the scale that best demonstrates your knowledge of the standard.

<table>
<tr><th></th><th>Description</th><th>Evidence</th></tr>
<tr><td>4</td><td>I can go beyond the standard.
• Create a real-world problem where a table is needed to display equivalent ratios.</td><td></td></tr>
<tr><td>3</td><td>I understand the entire standard.
• Given a real-world context, complete a table to display equivalent ratios.</td><td>The table below shows the relationship between servings, eggs, and milk for a recipe.
<table><tr><td>Servings</td><td>2</td><td>5</td><td></td><td>10</td></tr><tr><td>Eggs</td><td>4</td><td>10</td><td></td><td></td></tr><tr><td>Cups of milk</td><td></td><td></td><td>2</td><td>$2\frac{1}{2}$</td></tr></table>
What values complete the table?</td></tr>
</table>

Name _____ Date _____

MA.6.AR.3.3 (continued)

<table>
<tr><th></th><th>Description</th><th>Evidence</th></tr>
<tr><td>2</td><td>I understand some parts, but not the entire standard.
Given a real-world context, make a plan to complete a table to display equivalent ratios.</td><td>For every 5 tickets, you sell your friend sells 3 tickets.
Make a plan to complete the following table.
<table><tr><td>You</td><td>5</td><td>10</td><td></td><td></td></tr><tr><td>Friend</td><td>3</td><td></td><td>18</td><td>36</td></tr></table></td></tr>
<tr><td>1</td><td>I understand the basic skills needed to begin learning this standard.
Write ratios.</td><td>The list represents the favorite type of pet. Find the following ratios.
Dogs: 9
Cats: 6
Fish: 4
Reptiles: 3
a. Dogs : Class

b. Fish : Cats

c. Reptiles : Cats and dogs</td></tr>
</table>

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning
MA.6.AR.3.4 Apply ratio relationships to solve mathematical and real-world problems involving percentages using the relationship between two quantities.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Solve a real-world problem that uses percentage between two quantities multiple times.	The original price of a jacket is $\$100$. The jacket is on sale for 40% off. What is the final price of the item if there is 5% sales tax?
3	**I understand the entire standard.** • Given a real-world problem, solve using percentage between two quantities.	**a.** A restaurant has a 25% off sale. You save $\$4$ on a meal. What was the original price of the meal? **b.** At the same restaurant, a family has a bill of $\$38$. What is the amount of the discount and the final bill?

Name _____ Date _____

MA.6.AR.3.4 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Given a mathematical problem, solve using the percentage between two quantities.	**a.** What is 45% of 60? **b.** 20% of what number is 75?
1	**I understand the basic skills needed to begin learning this standard.** • Convert fractions and mixed numbers to percents.	Convert the fraction or mixed number to a percent. **a.** $\frac{12}{25}$ **b.** $\frac{27}{50}$ **c.** $1\frac{11}{20}$

Name _____ Date _____

Evidence-Based Scale Worksheets

Algebraic Reasoning

MA.6.AR.3.5 Solve mathematical and real-world problems involving ratios, rates and unit rates, including comparisons, mixtures, ratios of lengths and conversions within the same measurement system.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Create a real-world problem involving a ratio or rate that includes a comparison, mixture, or measurement conversion.	
3	**I understand the entire standard.** • Solve real-world problems involving ratios, rates, and unit rates.	**a.** You buy 2 pounds of chicken at Store A for $6.50. Your friend buys 3 pounds of chicken at Store B for $10.50. How much less would you spend for 5 pounds of chicken at the store with the better deal? **b.** A car travels 3 miles in 5 minutes. A subway train travels 4 miles in 6 minutes. How much longer does it take to travel 7 miles in the slower vehicle?

Name _____ Date _____

MA.6.AR.3.5 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Solve mathematical problems involving ratios, rates, and unit rates.	**a.** Convert 3 yards to inches. **b.** Convert 750 meters to kilometers.
1	**I understand the basic skills needed to begin learning this standard.** • Find unit rates.	Write a unit rate for each situation. **a.** You jog 21 miles in 6 days. **b.** You buy 4.5 pounds of fruit for $12.51. **c.** Your travel 90 miles in 2.5 hours.

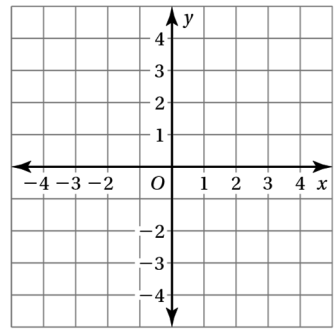
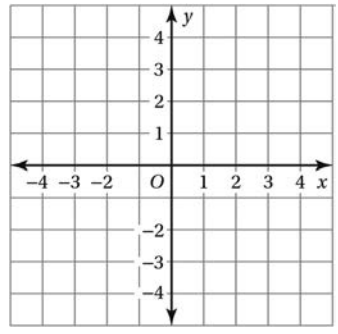
Name _____ Date _____

Evidence-Based Scale Worksheets

Geometric Reasoning

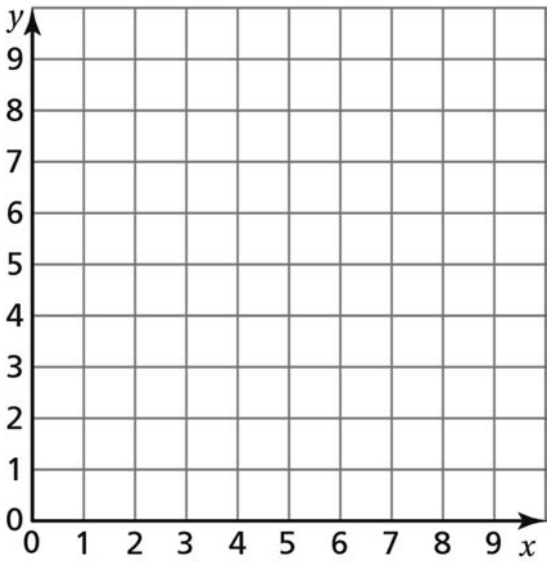
MA.6.GR.1.1 Extend previous understanding of the coordinate plane to plot rational number ordered pairs in all four quadrants and on both axes. Identify the x- or y-axis as the line of reflection when two ordered pairs have an opposite x- or y-coordinate.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Plot rational number ordered pairs and reflect points in a line other than the *x*- or *y*-axis.	Plot each ordered pair in the coordinate plane. Reflect each point in the dashed line. **a.** $A(0, 2)$ **b.** $B(-1.5, -3)$ 
3	**I understand the entire standard.** • Plot rational number ordered pairs and reflect points in the *x*- and *y*-axes.	**a.** Reflect $A\left(-\frac{5}{2}, 0\right)$ in the *y*-axis. Plot both ordered pairs in the coordinate plane. **b.** Reflect $B(2, -2.75)$ in the *x*-axis. Plot both ordered pairs in the coordinate plane. 

Name _____ Date _____

MA.6.GR.1.1 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Identify the x- or y-axis as the line of reflection when two ordered pairs have an opposite x- or y-coordinate.	Identify the line of reflection between the points. **a.** Point $(-3, 1)$ becomes point $(-3, -1)$ after the reflection. **b.** Point $(2, 6)$ becomes point $(-2, 6)$ after the reflection.
1	**I understand the basic skills needed to begin learning this standard.** • Plot ordered pairs in the first quadrant of the coordinate plane.	Plot the ordered pairs in the coordinate plane. Label the points. **a.** $A(4, 1)$ **b.** $B(6, 8)$ **c.** $C(3, 5)$ **d.** $D(7, 2)$ 

Name _____ Date _____

Evidence-Based Scale Worksheets

Geometric Reasoning
MA.6.GR.1.2 Find distances between ordered pairs, limited to the same x-coordinate or the same y-coordinate, represented on the coordinate plane.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Find distances between ordered pairs, limited to the same x-coordinate or the same y-coordinate, where there are variables for the different coordinates.	Find the distance between the points. **a.** $A(7, 2y)$ and $B(7, y)$ **b.** $C(4x, -6)$ and $D(8x, -6)$
3	**I understand the entire standard.** • Find distances between ordered pairs, limited to the same x-coordinate or the same y-coordinate, represented on the coordinate plane.	Find the distance between the points. **a.** $A\left(-3\frac{1}{2}, 0\right)$ and $B\left(-1\frac{1}{4}, 0\right)$ **b.** $C\left(2\frac{3}{4}, -2\frac{1}{2}\right)$ and $D\left(2\frac{3}{4}, -4\frac{1}{2}\right)$ **c.** $E(-2.25, -3)$ and $F(-2.25, 3.25)$

Name _____ Date _____

MA.6.GR.1.2 (continued)

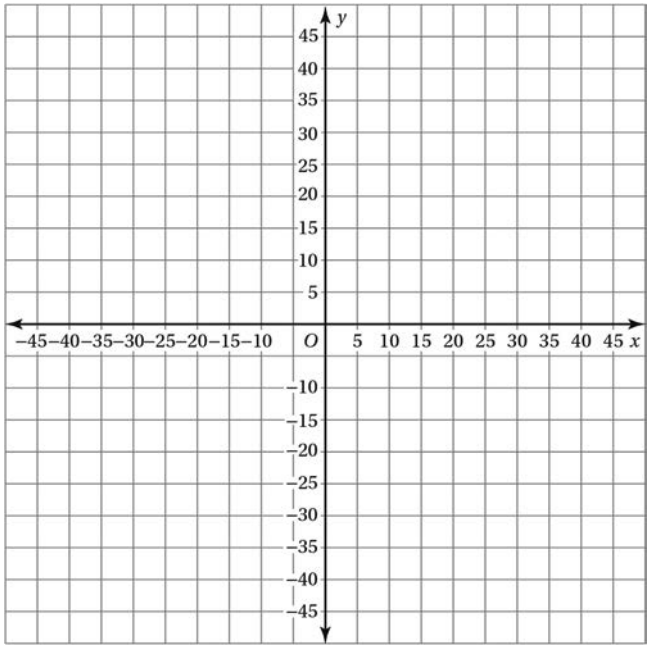
	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Find distances between ordered pairs, limited to the same x-coordinate or the same y-coordinate, represented on the coordinate plane in the first quadrant.	Find the distance between the points. **a.** $A(4, 1)$ and $B(4,10)$ **b.** $C(3,7)$ and $D(9, 7)$ **c.** $E(14,2)$ and $F(2,2)$
1	**I understand the basic skills needed to begin learning this standard.** • Find the distance between two points on a number line.	Find the distance between the points on a number line. **a.** –3 and 9 **b.** –8 and –2

Name _____ Date _____

Evidence-Based Scale Worksheets

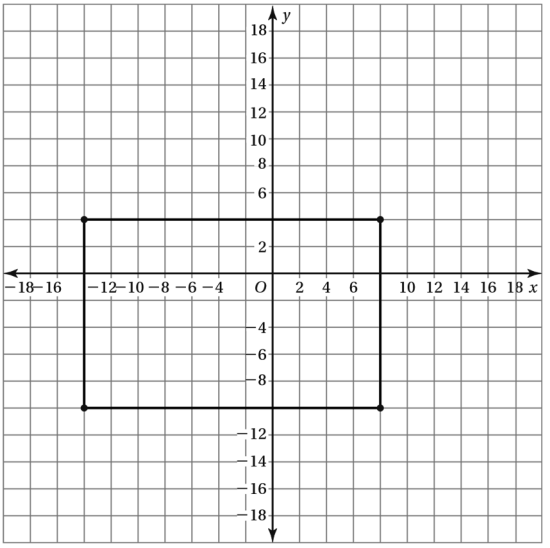
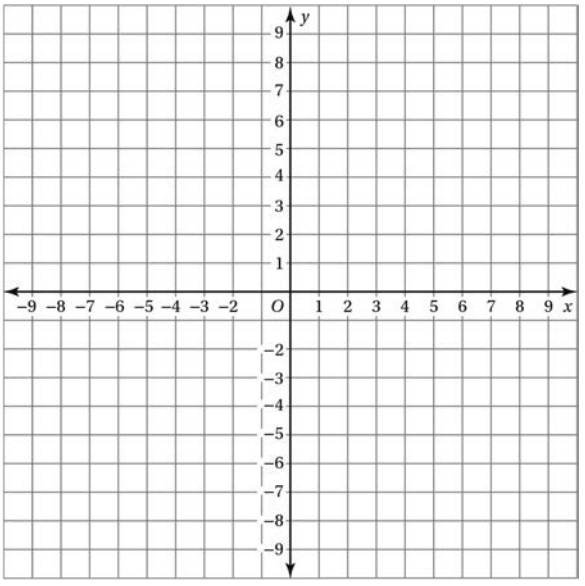
Geometric Reasoning
MA.6.GR.1.3 Solve mathematical and real-world problems by plotting points on a coordinate plane, including finding the perimeter or area of a rectangle.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Write and solve a real-word problem where points are plotted on a coordinate plane and the perimeter and area of a rectangle are calculated.	
3	**I understand the entire standard.** • Draw a rectangle in a coordinate plane for a real-world problem. • Find the perimeter and area of a rectangle in a coordinate plane.	You sketch a park in a coordinate plane in which the coordinates are measured in feet. The vertices of the park are (–30, –15), (–30, 45), (40, 45), and (40, –15). **a.** Plot the shape on the coordinate plane.  **b.** Find the perimeter and the area of the court.

Name _____ Date _____

MA.6.GR.1.3 (continued)

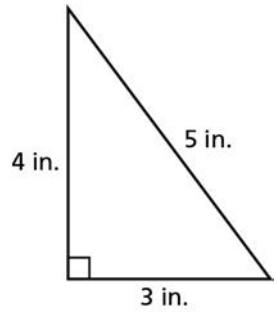
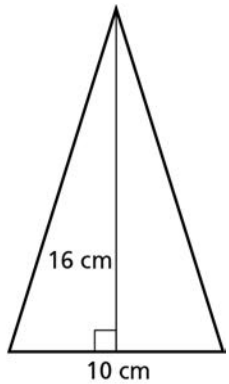
	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Find the perimeter and area of a rectangle in a coordinate plane.	Find the perimeter and the area of the rectangle shown. 
1	**I understand the basic skills needed to begin learning this standard.** • Plot ordered pairs in the coordinate plane.	Plot the points in the coordinate plane. **a.** $A(-6, 2)$ **b.** $B(4, -8)$ **c.** $C(-3, -7)$ **d.** $D(7, 5)$ 

Name _____ Date _____

Evidence-Based Scale Worksheets

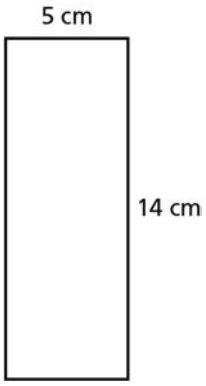
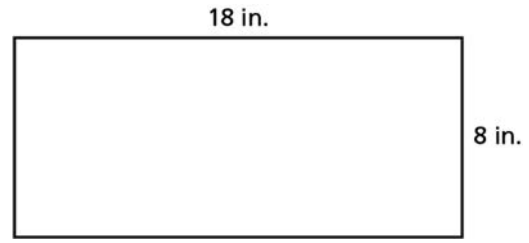
Geometric Reasoning
MA.6.GR.2.1 Derive a formula for the area of a right triangle using a rectangle. Apply a formula to find the area of a triangle.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Derive the formula for the area of a triangle using a non-right triangle.	Given a rectangle with base b and height h, prove the formula for the area of a rectangle.
3	**I understand the entire standard.** • Find the area of a triangle.	Find the area. **a.**  **b.** 

Name _____ Date _____

MA.6.GR.2.1 (continued)

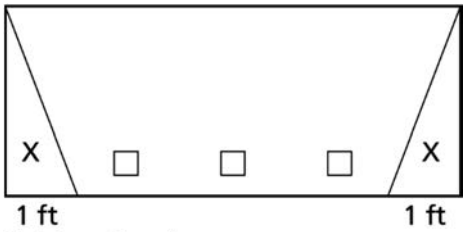
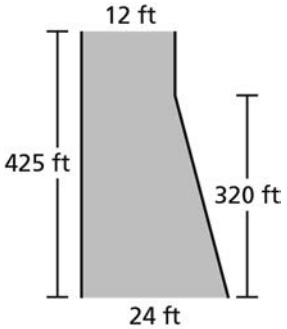
	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Find the area of a rectangle.	Find the area. **a.**  **b.** 
1	**I understand the basic skills needed to begin learning this standard.** • Find the area of a square.	Find the area of a square with side length of 10 centimeters.

Name _____ Date _____

Evidence-Based Scale Worksheets

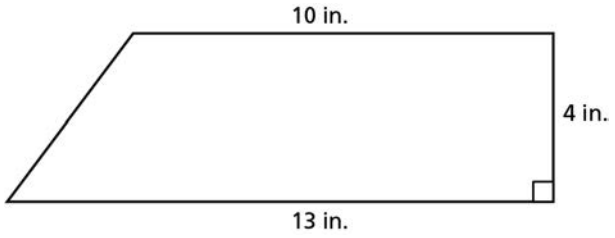
Geometric Reasoning
MA.6.GR.2.2 Solve mathematical and real-world problems involving the area of quadrilaterals and composite figures by decomposing them into triangles or rectangles.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Solve a complex real-world problem involving the area of quadrilaterals and composite figures by decomposing them into triangles or rectangles.	The top of the desk is being made from an 8 foot by 4-foot piece of plywood. Each end has a section removed (marked with an X). There are also three quarter-inch squares to be cut from top. What is the area of the top of the board?  *Not drawn to scale*
3	**I understand the entire standard.** • Solve a real-world problem involving the area of quadrilaterals and composite figures by decomposing them into triangles or rectangles.	Construction workers pave a section of road that decreases from two lanes to one lane as shown. How many square feet do the workers need to cover to pave the entire section?  *Not drawn to scale*

Name _____ Date _____

MA.6.GR.2.2 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Solve a mathematical problem involving the area of quadrilaterals and composite figures by decomposing them into triangles or rectangles.	Find the area of the quadrilateral. 
1	**I understand the basic skills needed to begin learning this standard.** • Find the area of a rectangle. • Find the area of a triangle.	Find the area of the shape described. **a.** A rectangle with a length of 12 centimeters and width of 14 centimeters **b.** A triangle with a base of 16 inches and a height of 15 inches

Name _____ Date _____

Evidence-Based Scale Worksheets

Geometric Reasoning

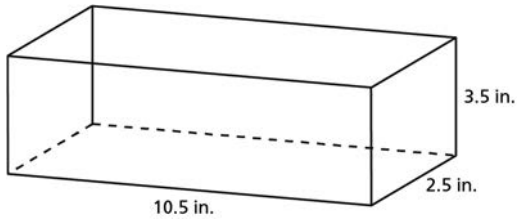
MA.6.GR.2.3 Solve mathematical and real-world problems involving the volume of right rectangular prisms with positive rational number edge lengths using a visual model and a formula.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Write a real-world problem involving finding the volume of a right rectangular prism with all edge lengths positive rational numbers.	
3	**I understand the entire standard.** • Solve a real-world problem involving the volume of right rectangular prisms with positive rational number edge lengths.	**a.** A shoe box has a volume of 483 cubic centimeters. The width is 6.25 centimeters and the height is 4.6 meters. What is the length of the box? **b.** A storage bin in the shape of a square right rectangular prism. The width and the height are $1\frac{2}{3}$ feet. The length is 5 times the width. What is the volume of the storage bin?

Name _____ Date _____

MA.6.GR.2.3 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Solve a mathematical problem involving the volume of right rectangular prisms with positive rational number edge lengths.	Find the volume of each prism. **a.**  **b.** A rectangular prism with a length of $3\frac{1}{4}$ feet, 6 feet, and $2\frac{2}{3}$ feet
1	**I understand the basic skills needed to begin learning this standard.** • Find the area of a rectangle. • Find the area of a square.	Find the area of each figure. **a.** A rectangle with a length of 4 meters and a width of 7 meters **b.** A square with a side length of 8 yards

Name _____ Date _____

Evidence-Based Scale Worksheets

Geometric Reasoning

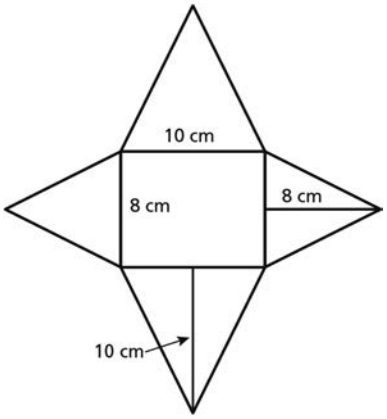
MA.6.GR.2.4 Given a mathematical or real-world context, find the surface area of right rectangular prisms and right rectangular pyramids using the figure's net.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** Write a formula for the surface area of a rectangular prism.	Write a formula for the surface area S of a rectangular prism with length ℓ, width w, and height h.
3	**I understand the entire standard.** • Solve a real-world problem to find the surface area of a right rectangular prism. • Solve a real-world problem to find the surface area of a right rectangular pyramid.	**a.** You place a gift in a box. The box is in the shape of a rectangular prism with a length of 16 inches, a width of 6 inches, and a height of 4 inches. What is the least amount of wrapping paper that you need to wrap the box? **b.** A model of a square pyramid needs to be painted. The base is 12 centimeters and the height of each triangle is 10 centimeters. What is the area that needs to be painted?

Name _____ Date _____

MA.6.GR.2.4 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Solve a mathematical problem to find the surface area of a right rectangular pyramid using the figure's net. • Solve a mathematical problem to find the surface area of a right rectangular prism using the figure's net.	**a.** What is the surface area?  **b.** A cube has a surface area of 252 cubic inches. What is the length of one side of the cube?
1	**I understand the basic skills needed to begin learning this standard.** • Draw nets of three-dimensional figures.	Draw a net of the figure. **a.** A triangular prism **b.** A rectangular pyramid

Name _____ Date _____

Evidence-Based Scale Worksheets

Data Analysis and Probability
MA.6.DP.1.1 Recognize and formulate a statistical question that would generate numerical data.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Ask several people a statistical question and record the results.	
3	**I understand the entire standard.** • Recognize where a question is statistical.	Determine whether each question is a statistical question. **a.** How old is your math teacher? **b.** How old are the teachers at your school?

Name_____ Date _____

MA.6.DP.1.1 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Determine whether a question has one answer or many possible answers.	You ask each question to several students in your class. Determine whether each question has *one answer* or *many possible answers*. **a.** What time do you go to bed in the evening? **b.** How many inches tall is your mother?
1	**I understand the basic skills needed to begin learning this standard.** • Understand the concept of statistics.	Define *statistics*.

Name _____ Date _____

Evidence-Based Scale Worksheets

Data Analysis and Probability
MA.6.DP.1.2 Given a numerical data set within a real-world context, find and interpret mean, median, mode and range.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Collect numerical data within a real-world context. The find and interpret the mean, median, mode, and range.	
3	**I understand the entire standard.** • Given a numerical data set within a real-world context, find and interpret mean, median, mode, and range.	The hourly wages of employees are listed for a business in dollars: 14, 16, 15, 13, 16, 12, 18, 16, 14, 15, 20, 20 Find and interpret: **a.** Mean **b.** Median **c.** Mode **d.** Range

Name _____ Date _____

MA.6.DP.1.2 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Find the mean, median, mode, and range of a data set.	Given the data set 1, 2, 3, 4, 4, 4, 5, 7, 7, 8, 8, 9, 9, find the mean, median, mode, and range. **a.** Mean **b.** Median **c.** Mode **d.** Range
1	**I understand the basic skills needed to begin learning this standard.** • Understand the concepts of mean, median, and mode.	Define *mean*, *median*, and *mode*.

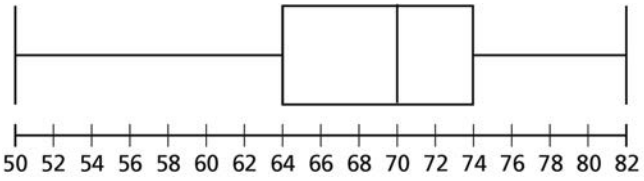
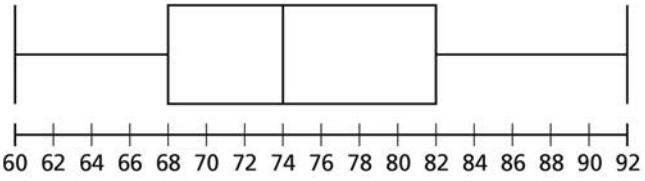
Name _____ Date _____

Evidence-Based Scale Worksheets

Data Analysis and Probability

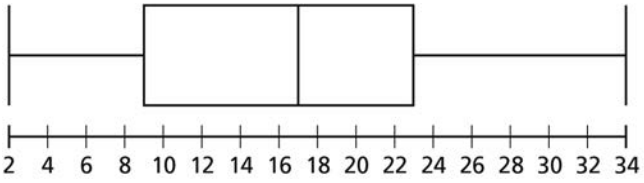
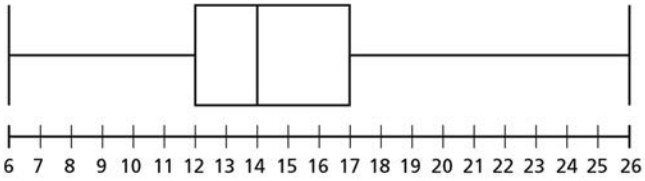
MA.6.DP.1.3 Given a box plot within a real-world context, determine the minimum, the lower quartile, the median, the upper quartile and the maximum. Use this summary of the data to describe the spread and distribution of the data.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Explain the meaning of each section for a box plot.	The box plot shows the high temperatures for one month in °F.  Explain the meaning of the lower 25%, 50%, and upper 25% in relation to the box plot.
3	**I understand the entire standard.** • Given a box plot within a real-world context, describe the spread and distribution of the data.	The box plot shows the number of points scored by a basketball team.  **a.** Find the range and interpret the meaning. **b.** Find the interquartile range and interpret the meaning. **c.** Describe the distribution of the data.

Name _____ Date _____

MA.6.DP.1.3 (continued)

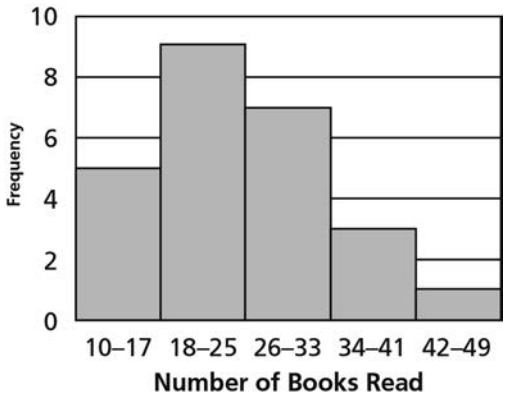
	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Create a plan on how to find the five-number summary, range, and interquartile range of a box plot, given a real-world context.	The box plot represents the number of years employees have worked at a company.  **a.** Five-Number Summary **b.** Range **c.** Interquartile Range
1	**I understand the basic skills needed to begin learning this standard.** • Find the five-number summary of a box plot.	Find the five-number summary of the box plot. 

Name _____ Date _____

Evidence-Based Scale Worksheets

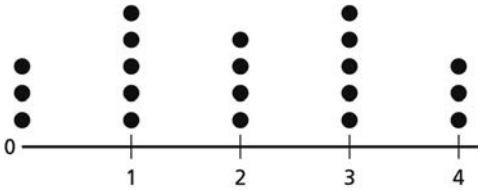
Data Analysis and Probability
MA.6.DP.1.4 Given a histogram or line plot within a real-world context, qualitatively describe and interpret the spread and distribution of the data, including any symmetry, skewness, gaps, clusters, outliers and the range.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Describe advantages of different types of data displays.	Describe an advantage of each type of data display. **a.** line plot **b.** histogram **c.** box-and-whisker plot
3	**I understand the entire standard.** • Given a histogram within a real-world context, qualitatively describe and interpret the spread and distribution of the data.	The histogram shows the number of books read during the summer by a class.  **a.** Discuss the shape of the histogram. **b.** Discuss any gaps or clusters. **c.** Discuss any outliers.

Name _____ Date _____

MA.6.DP.1.4 (continued)

	Description	Evidence
2	**I understand some parts, but not the entire standard.** • Given a line plot within a real-world context, qualitatively describe and interpret the spread and distribution of the data.	The dot plot shows the number of pets each student has at home.  **a.** Discuss the shape of the line plot. **b.** Discuss any peaks, gaps, or clusters. **c.** Discuss any outliers.
1	**I understand the basic skills needed to begin learning this standard.** • Identify numeric values that can be determined from a histogram and a line plot.	Identify the numeric values that can be determined from a histogram or a line plot.

Name _____ Date _____

Evidence-Based Scale Worksheets

Data Analysis and Probability
MA.6.DP.1.5 Create box plots and histograms to represent sets of numerical data within real-world contexts.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Explain to others how to create a box plot and a histogram.	
3	**I understand the entire standard.** • Create a histogram within a real-world context.	The table shows the weights of dogs at a pet store. Display the data in a histogram.

Weights (pounds)				
24	30	27	34	18
16	14	10	15	19
20	22	24	31	32
18	22	16	19	25

Name _____ Date _____

MA.6.DP.1.5 (continued)

<table>
<tr><th></th><th>Description</th><th>Evidence</th></tr>
<tr><td>2</td><td>I understand some parts, but not the entire standard.
Create a box plot within a real-world context.</td><td>The table shows the number of hours spent on the Internet during the week. Display the data in a dot plot.<table><tr><th colspan="4">Hours on the Internet</th></tr><tr><td>2</td><td>4</td><td>5</td><td>7</td></tr><tr><td>3</td><td>6</td><td>8</td><td>5</td></tr><tr><td>7</td><td>4</td><td>6</td><td>3</td></tr><tr><td>4</td><td>5</td><td>8</td><td>3</td></tr></table></td></tr>
<tr><td>1</td><td>I understand the basic skills needed to begin learning this standard.
Graph numbers on a number line.</td><td>Graph 10, 15, 30, and 40 on the number line.</td></tr>
</table>

Name _____ Date _____

Evidence-Based Scale Worksheets

Data Analysis and Probability
MA.6.DP.1.6 Given a real-world scenario, determine and describe how changes in data values impact measures of center and variation.

Circle the scale that best demonstrates your knowledge of the standard.

	Description	Evidence
4	**I can go beyond the standard.** • Write a real-world scenario and describe how changes in data values (increases or decreases) impact measures of center and variation.	
3	**I understand the entire standard.** • Given a real-world scenario, determine and describe how changes in data values impact measures of center and variation.	The table shows the number of eggs laid by chickens in a week. **Eggs** 34, 32, 40, 33, 35 41, 45, 42, 36, 38 43, 37, 33, 35, 39 40, 41, 44, 45, 46 There are 2 more chickens added to the list. These chickens lay 54 and 57 eggs. How do the eggs that the additional chickens lay affect the measures of center and variation?

Name _____ Date _____

MA.6.DP.1.6 (continued)

<table>
<tr><th></th><th>Description</th><th>Evidence</th></tr>
<tr><td>2</td><td>I understand some parts, but not the entire standard.
Make a plan for determining how changes in data values affect measures of center and variation.</td><td>The table shows the number of points earned on a math quiz. Two more quizzes were graded and students scored 4 and 5 points. Make a plan for determining how the additional quiz scores affect the measures of center and variation.

<table><tr><th colspan="4">Points</th></tr><tr><td>8</td><td>10</td><td>8</td><td>9</td></tr><tr><td>10</td><td>12</td><td>13</td><td>14</td></tr><tr><td>15</td><td>14</td><td>13</td><td>11</td></tr><tr><td>9</td><td>10</td><td>14</td><td>15</td></tr></table></td></tr>
<tr><td>1</td><td>I understand the basic skills needed to begin learning this standard.
Find the mean, median, range, and interquartile range of a data set.</td><td>The table shows the amount earned from donations to a charity. Find the mean, median, range, and interquartile range of the data set.

50, 50, 50, 75, 75, 100, 100, 100, 100, 125, 125, 125, 150, 175, 200, 200, 250, 250, 350, 500</td></tr>
</table>