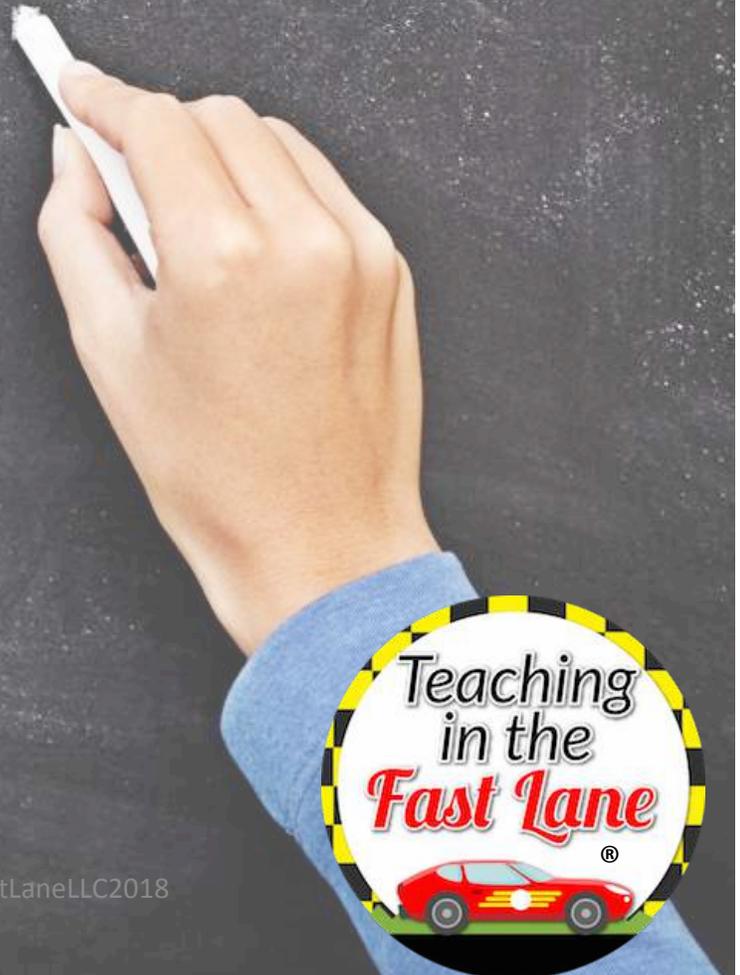


Review

Unit

4th Grade



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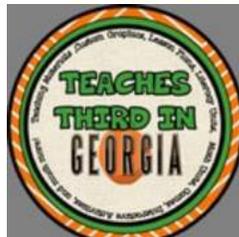
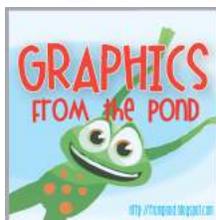


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TO The Teacher

Thank you for purchasing this resource! Within it you will find a complete unit for reviewing the fourth grade math standards including pre-assessment, daily warm-ups and exit tickets, daily lessons with student activities, and a post assessment.

While this unit is laid out over an eighteen day time span do not feel that you must rigidly stick to the timeline. As a teacher you know what is best for your students, and should follow your gut, as some classes may require more time to reach understanding of a concept.

To save on ink and decrease prep time, every page of this unit is created in black and white. To create a more colorful unit print or copy on color paper.

Place Value Standards

TEKS

- 4.2A** interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left
- 4.2B** represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals
- 4.2C** compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols $>$, $<$, or $=$
- 4.2D** round whole numbers to a given place value through the hundred thousands place

CCSS

- NBT.A1** Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.*
- NBT.A2** Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.
- NBT.A3** Use place value understanding to round multi-digit whole numbers to any place.

Decimals Standards

TEKS

- 4.2E** represent decimals, including tenths and hundredths, using concrete and visual models and money
- 4.2F** compare and order decimals using concrete and visual models to the hundredths
- 4.2G** relate decimals to fractions that name tenths and hundredths
- 4.2H** determine the corresponding decimal to the tenths or hundredths place on a specific point on a number line

CCSS

- 4.NF.C.6** Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite 0.62 as $\frac{62}{100}$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.*
- 4.NF.C.7** Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model.

Fractions Standards

TEKS

- 4.3A** represent a fraction a/b as a sum of fractions $1/b$, where a and b are whole numbers and $b > 0$, including when $a > b$
- 4.3B** decompose a fraction in more than one way into a sum of fractions with the same denominator, using concrete and pictorial models and recording results with symbolic representations
- 4.3C** determine if two given fractions are equivalent using a variety of methods
- 4.3D** compare two fractions with different numerators and different denominators and represent the comparison using the symbols $>$, $=$, or $<$

CCSS

- 4.NF.A.1** Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
- 4.NF.C.7** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $<$, $=$, or $>$, and justify the conclusions, e.g., by using a visual fraction model.

Adding and Subtracting Fractions Standards

TEKS

4.3E

represent and solve addition and subtraction of fractions with equal denominator using objects and pictorial models that build to the number line and properties of operations

4.3F

evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0 , $\frac{1}{2}$, $\frac{2}{3}$, and 1 , referring to the same whole

CCSS

4.NF.B.3.C

Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

4.NF.B.3.D

Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.

Addition & Subtraction Standards

TEKS

4.4A add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

CCSS

4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm

4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answer using mental computation and estimation strategies including rounding.

MULTIPLICATION

TEKS Standards

- 4.4B** determine products of a number and 10 or 100 using properties of operations and place value understandings
- 4.4C** represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15
- 4.4D** use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties

CCSS

- 4.NBT.B.5** Multiply a whole number up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- 4.OA.A.1** Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
- 4.OA.B.4** Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.

DIVISION STANDARDS

TEKS

- 4.4E** represent the quotient of up to a four-digit whole number divided by a one-digit whole number using arrays, area models, or equations
- 4.4F** use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor
- 4.4G** round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers
- 4.4H** solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders

CCSS

- 4.NBT.B.6** Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- 4.OA.A.2** Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

MODELS FOR PROBLEM SOLVING STANDARDS

TEKS

4.5A represent multi-step problems involving the four operations with whole numbers using strip-diagrams and equations with a letter standing for the unknown quantity

CCSS

4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

MULTI-STEP PROBLEM SOLVING STANDARDS

TEKS

4.4H solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders

4.5A represent multi-step problems involving the four operations with whole numbers using strip-diagrams and equations with a letter standing for the unknown quantity

CCSS

4.OA.B.4 solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Numerical Patterns Standards

TEKS

4.5B represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

CCSS

4.OA.C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

Perimeter & Area Standards

TEKS

4.5D solve problems related to the perimeter and area of rectangles where dimensions are whole numbers

CCSS

4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*

Geometry Standards

TEKS

- 4.6A** identify points, lines, line segments, rays, angles, and perpendicular and parallel lines
- 4.6B** identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure
- 4.6C** apply knowledge of right angles to identify acute, right, and obtuse triangles
- 4.6D** classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size

CCSS

- 4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- 4.G.A.2** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
- 4.G.A.3** Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Measuring Angles Standards

TEKS

- 4.6C** apply knowledge of right angles to identify acute, right, and obtuse triangles
- 4.7C** determine the approximate measures of angles in degrees to the nearest whole number using a protractor
- 4.7D** draw an angle with a given measure
- 4.7E** determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures

CCSS

- 4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- 4.MD.C.6** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
- 4.MD.C.7** Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Measurement Standards

TEKS

- 4.8A** identify relative sizes of measurement units within the customary and metric systems
- 4.8B** convert measurements units within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measurements represented in a table
- 4.8C** solve problems that deal with measurement of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

CCSS

- 4.MD.A.1** Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36),...*
- 4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

DATA & GRAPHS STANDARDS

TEKS

4.9A represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions

4.9B solve one- and two-step problems using data in whole number, decimal, and fraction form in a frequency table, dot plot, or stem-and-leaf plot

CCSS

4.MD.B.4 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*

Financial Literacy Standards

TEKS

4.10A

distinguish between fixed and variable expenses

4.10B

calculate profit in a given situation

4.10C

compare the advantages and disadvantages of various savings options

4.10D

describe how to allocate weekly allowance among spending, saving, including for college; and sharing

4.10E

describe the basic purpose of financial institutions, including keeping money safe, borrowing money, and lending

ALL ABOUT This Unit

This unit is made up of unique elements that can be used independently or together to provide a complete unit of math instruction.

Pre-Assessment and Student Data Checklist

To be used as an informal assessment to check students' prior knowledge as well as determine any misconceptions. The data that you gather from this pre-assessment can be recorded on the Student Data Checklists and used to set student learning goals, form small groups, or partner students based on ability. Checklists fit 11 students per page.

This pre-assessment is set up with one question based on each of the sixteen strands of standards. It is important to look at each question the students succeed on or miss and how they can be unpacked to find the misconception.

For example, if a student misses a question based on measuring angles, do they not understand how to use a protractor, types of angles, or is it something else?

This “unpacking” of the question will lead students to a deeper understanding of the content.

ALL ABOUT This Unit

DAILY WARM-UPS

Sixteen days of half-page daily warm-ups are provided along with answer keys. Each day has two standards-based questions for that day's standard strand for students to think through their learning. A student tracking sheet is also included for students to record their own grow and glow areas. To save paper you may choose to project the warm up each day and have students complete their work in math notebooks.

EXIT TICKETS

Sixteen days worth of exit tickets and answer keys, with one question each, are included two to a page for easy copying. Each of the questions is based on how that day's standard is tested, providing a test bridge and exposing students to test style language. This serves to build familiarity with standardized testing without overwhelming students.

Exit tickets can be checked as a class, or by the teacher. A checklist of questions is included to track how students are doing on their exit tickets.

ASSESSMENT

An end of unit assessment is included to check for student mastery on the math standards included. This assessment is meant to be used informally. While students should do their best work, it is best to not place too much importance on the test.

Daily Lessons

Eighteen daily lessons are included in this unit. Each lesson includes:

- Guiding question(s)
- Objectives
- List of necessary materials
- Overview of the lesson
- Student activity sheets when applicable
- Suggestions for small group activity

Day 1	Pre-assessment and Student Goal Setting
Day 2	Place Value
Day 3	Decimals
Day 4	Fractions
Day 5	Adding & Subtracting Fractions with Like Denominators
Day 6	Addition and Subtraction
Day 7	Multiplication
Day 8	Division
Day 9	Models for Problem Solving
Day 10	Multi-Step Problem Solving
Day 11	Numerical Patterns
Day 12	Perimeter and Area
Day 13	Geometry
Day 14	Measuring Angles
Day 15	Measurement
Day 16	Data and Graphs
Day 17	Financial Literacy
Day 18	Assessment

Answer Key

Place Value

Write the number 49.07 in expanded notation.

$$(4 \times 10) + (9 \times 1) + (7 \times 0.01)$$

Fractions

Use a symbol to compare the fraction and $\frac{7}{8}$.

$$\frac{7}{8} > \frac{2}{10}$$

Addition and Subtraction

$$50.77 + 48.3 = 99.07$$

Division

$$639 \div 3 = 213$$

Multi-step Problem Solving

Grace bought three shirts for \$7 each and two pairs of pants for \$24 each. She also bought a necklace for \$8. How much did Grace spend?

\$77

Perimeter and Area

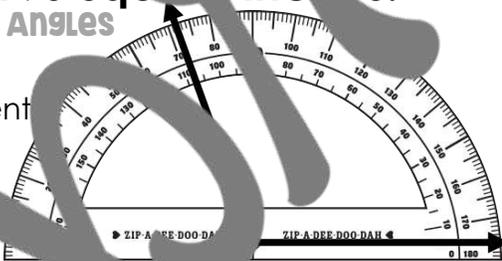
What is the perimeter and area of a square where one side measures 14 inches?

Perimeter is 56 inches

Area is 196 square inches.

Measuring Angles

What is the measurement of the angle?

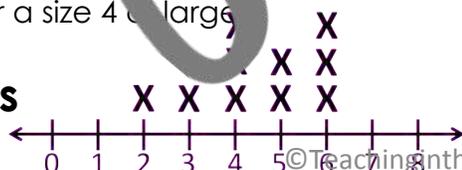


103°

Data and Graphs

The line plot represents the shoe sizes of students in the first grade. How many students wear a size 4 or larger?

9 students



Decimals

Write the decimal equivalent to the fraction $\frac{7}{100}$.

0.07

Adding and Subtracting Fractions

$$\frac{1}{9} + \frac{4}{9} = \frac{5}{9}$$

Multiplication

$$435 \times 8 = 3,480$$

Models for Solving

Create a strip diagram to model the equation $56 \div 8 =$

56						
7	7	7	7	7	7	7

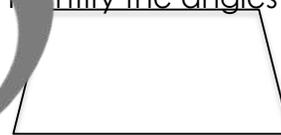
Numerical Equations

What is the rule for the input/output table shown?

Input	Output
4	16
6	24
8	32

Geometry

Identify the angles shown on the figure.



**No right angles,
two acute angles, &
two obtuse angles.**

Measurement

Rafael arrived at school at 7:05 am. It took him 5 minutes to walk to school, 32 minutes to take a shower and get dressed, and 10 minutes to eat breakfast. What time did Rafael wake up?

6:18 am

Financial Literacy

Anastasia spent \$12.35 on ingredients to bake and decorate cupcakes. She made 12 cupcakes and sold each one for \$2. How much profit did she make?

\$11.65

DAILY WARM-UPS

Sixteen days of half-page daily warm-ups are provided along with answer keys.

Each day has two standards-based questions for students to think through their learning.

A student tracking sheet is also included for students to record their own grow and glow areas.

To save paper you may choose to project the warm up each day and have students complete their work in math notebooks.

Name _____

Forms of a Number

Write the number ten million, three hundred sixty-four thousand, nine hundred twenty-three in standard form.

Value of Position

Does the bold number have one-tenth or ten times the value of the underlined number?

4.**4**

Name _____

Forms of a Number

Write the number ten million, three hundred sixty-four thousand, nine hundred twenty-three in standard form.

Value of Position

Does the bold number have one-tenth or ten times the value of the underlined number?

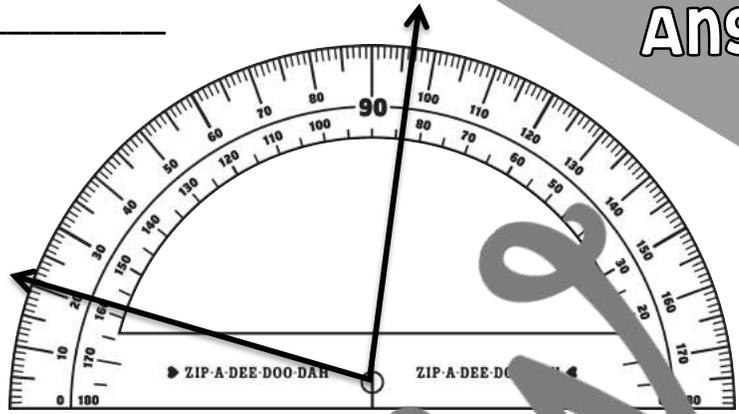
4.4**9**

Name _____

Measuring Angles

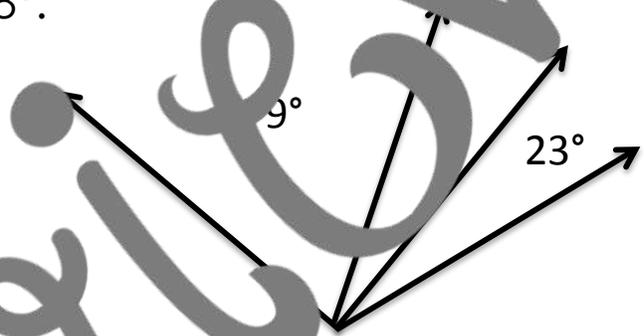
Measuring Angles

What is the measurement of the angle shown?



Angles are Additive

The angle shown measures 128° .
What is the measure of the unidentified angle?

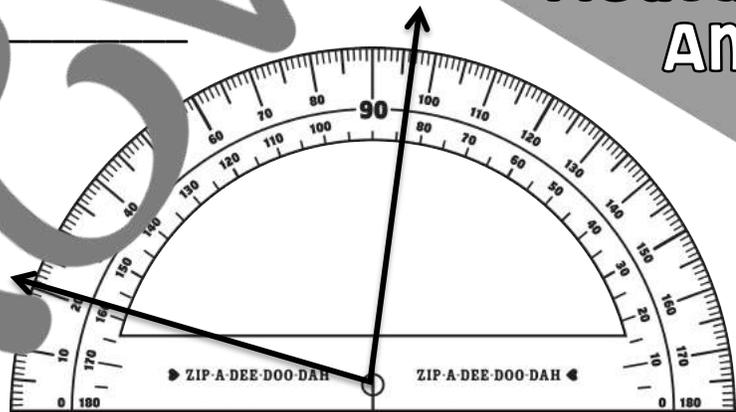


Name _____

Measuring Angles

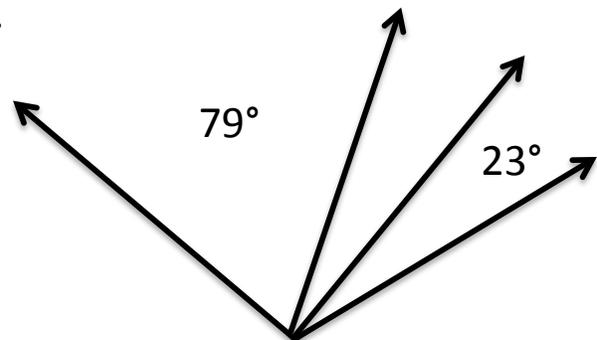
Measuring Angles

What is the measurement of the angle shown?



Angles are Additive

The angle shown measures 128° .
What is the measure of the unidentified angle?



Daily Warm-Up Answer Key

Name _____

Place
Value

Forms of a Number

Write the number ten million, three hundred sixty-four thousand, nine hundred twenty-three in standard form.

10,364,923

Value of Position

Does the bold number have one-tenth or ten times the value of the underlined number?

4.49

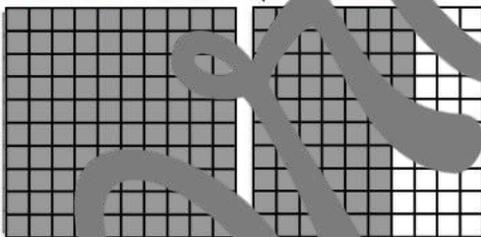
ten times the value

Name _____

Decimals

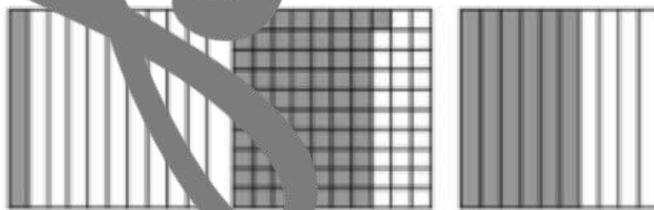
Models for Decimals

Shade the model to represent 1.6



Comparing & Ordering

Order the decimals shown from greatest to least.



1/10 < 6/10 < 71/100

Name _____

PERSONAL DAILY WARM-UP TRACKING SHEET

TOPIC	QUESTION 1	QUESTION 2
Place Value	Forms of a Number	Value of Position
Decimals	Models for Decimals	Comparing & Ordering
Fractions	Comparing Fractions	Equivalent Fractions
Adding & Subtracting Fractions	Adding Fractions	Subtracting Fractions
Addition & Subtraction	Addition	Subtraction
Multiplication	Two-Digit by Two-Digit Multiplication	Multi-Digit Multiplication
Division	Four Digit Division	Problem Solving
Models for Solving	Strip Diagram	Equations
Multi-Step Problem Solving	Multi-Step Problem Solving	Multi-Step Problem Solving
Numerical Patterns	Numerical Patterns	Input-Output Tables
Perimeter & Area	Perimeter	Area
Geometry	Lines	Angles
Measuring Angles	Measuring Angles	Angles are Additive
Measurement	Estimating Measurements	Converting Measurements
Data & Graphs	Creating Plots and Tables	Problem Solving
Financial Literacy	Fixed or Variable Expense	Finding Profit

Exit Tickets

Sixteen days worth of exit tickets and answer keys, with one question each, are included two to a page for easy copying.

Each of the questions is based on how that standard strand is tested, providing a test bridge and exposing students to test style language. This serves to build familiarity with standardized testing without overwhelming students.

Exit tickets can be checked as a class, or by the teacher. A checklist of questions is included to track how students are doing on their exit tickets.

EXIT Ticket **Name** _____

Mohammed spent \$16.29 at the movies on a matinee ticket and a bucket of popcorn. The digit 1 in this number has a value of --

- a. (1×100) dollars
- b. (1×1) dollars
- c. (1×10) dollars
- d. (1×0.1) dollars

Review Unit: Place Value

EXIT Ticket **Name** _____

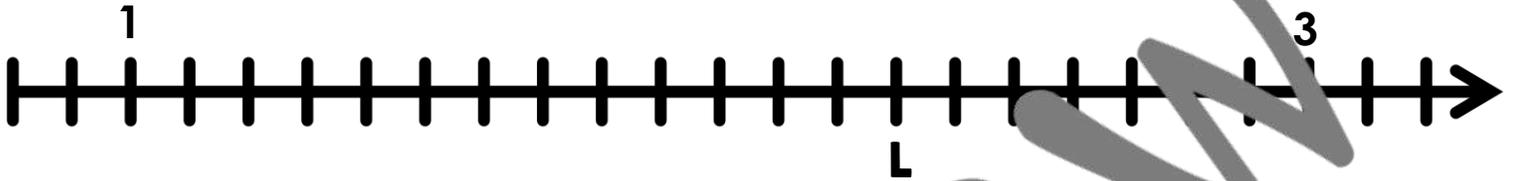
Mohammed spent \$16.29 at the movies on a matinee ticket and a bucket of popcorn. The digit 1 in this number has a value of --

- a. (1×100) dollars
- b. (1×1) dollars
- c. (1×10) dollars
- d. (1×0.1) dollars

Review Unit: Place Value

EXIT TICKET NAME _____

Point **L** on the number line represents the length of a piece of licorice in inches. What measurement does point L represent on the number line?

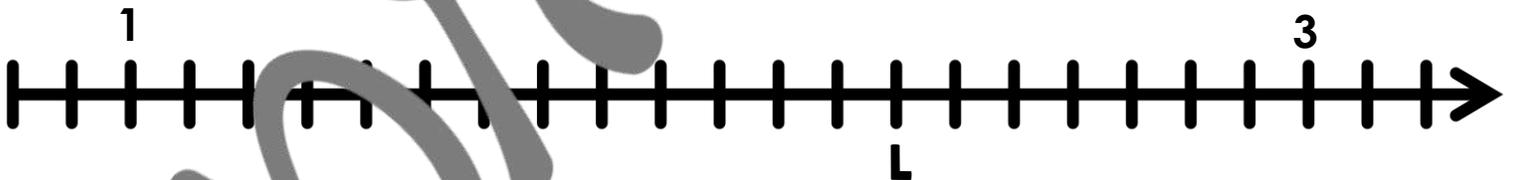


- a. 1.13 inches
- b. 2.3 inches
- c. 2.03 inches
- d. 23 inches

Review Unit: Decimals

EXIT TICKET NAME _____

Point **L** on the number line represents the length of a piece of licorice in inches. What measurement does point L represent on the number line?



- a. 1.13 inches
- b. 2.3 inches
- c. 2.03 inches
- d. 23 inches

Review Unit: Decimals

Exit Ticket Answer Key

Place value	C
Decimals	B
Fractions	A
Adding & Subtracting Fractions	D
Addition & Subtraction	B
Multiplication	C
Division	A
Models for Solving	D
Multi-Step Problem Solving	A
Numerical Patterns	D
Perimeter & Area	A
Geometry	D
Measuring Angles	C
Measurement	D
Data & Graphs	B
Financial Literacy	B

Daily Lessons

Eighteen daily lessons are included in this unit. Each lesson includes:

- Guiding question(s)
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- Overview of the lesson
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Day 12 Perimeter and Area

Day 13 Geometry

Day 14 Measuring Angles

Day 15 Measurement

Day 16 Data and Graphs

Day 17 Financial Literacy

Day 18 Assessment

Pre-Assessment & Student Goal Setting

Guiding Question

How can I show my prior knowledge of our 4th grade math standards?

Materials

- Pre-assessment
- Student Goal Setting Sheet

Learning Objective

We will use our prior knowledge of 4th grade math.

- L** Begin by giving students the Review Unit Pre-Assessment. As a class, go over the assessment together making any corrections necessary.
- e** Individually, students will use the goal setting sheet to create several goals for their learning through the review unit.
- S** Use the strategy inside-outside circle to have students share their goals with other students and cheer one another on.
- S** Have students keep their goals somewhere they can refer back to throughout the unit.

Small Group Ideas

Meet with students individually or in small groups to go over their goals for learning during the unit. Work with students to develop individual plans for how they will accomplish their goals throughout the review unit. Use this information to build your small groups for each topic throughout the unit.

Place Value

Guiding Question

How are numbers represented in different ways?

Materials

- Anchor Chart paper
- Place Value Scoot

Learning Objective

We will represent a number using standard form, word form, and expanded notation.

We will interpret the value of each place-value position.

L As a class review the different forms of a number including standard form, word form, and expanded notation. Take a moment to ensure students understand the difference between expanded notation and expanded form. Call on a couple of students to generate random numbers and use the anchor chart paper to write the numbers in each form.

S Using student math journals or dry erase boards call out a couple of random numbers (whole numbers and decimals) and have students write each in their forms then check together.

S Take a moment to also quickly review rounding and comparing numbers using the numbers you have already generated.

O For practice, students will complete a round of Place Value Scoot.

Small Group Ideas

Using student white boards or math journals, have students take turns generating a number for everyone to write in all forms. Keep a running list of the numbers you have used and use them again to practice rounding as well as comparing and ordering.

Decimals

Guiding Question

How can I show my knowledge of decimals to the hundredths place?

Materials

- Anchor Chart Paper
- Visual Models Partner Quiz

Learning Objective

We will relate decimals to fractions that name tenths and hundredths.
We will represent decimals using visual models.
We will compare and order decimals using visual models.

L Come together as a class to talk about what students already know about decimals. Create an anchor chart using the anchor chart paper. As each topic is brought up take the time to use a couple of examples for each. Be sure to include examples for relating decimals to fractions, representing decimals with visual models and comparing and ordering decimals.

S After reviewing each of the decimal concepts, students will practice identifying decimals and their fractions based on visual models using the Partner Quiz.

S Once you have completed the Partner Quiz, students will practice ordering decimals using the same cards from the Partner Quiz. Assign each student a card and have the class work cooperatively to order decimals from least to greatest.

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Small Group Ideas

Using math manipulatives have students create models for different decimals. Once they create the decimal they should identify the decimal and fraction it represents.

Fractions

Guiding Question

How can I show my prior knowledge of fraction concepts?

Materials

- Anchor Chart Paper
- Fraction Table Game

Learning Objective

We will compare two fractions using comparison symbols.
We will determine if two fractions are equivalent.
We will decompose fractions.

L Begin the lesson by bringing students together and writing several fractions on the anchor chart paper. Using student whiteboards or math journals lead students through comparing two fractions using multiple strategies including creating models for each fraction. Review with students what each comparison symbol means and use them to write comparison statements. Finally, review how each fraction can be decomposed into unit fractions or multiples of unit fractions in multiple ways. For example, three-fifths could be decomposed into three one-fifths or a one-fifth and two-fifths. Have students practice decomposing each of the example fractions.

S For practice, students will complete the Fraction Table Game with questions about each of the fraction skills.

Small Group Ideas

Using student whiteboards or math journals, have students each generate a fraction to decompose. Then have students partner up to compare their fractions. Finally, the group works together to order all of their fractions. Repeat this process for as long as time allows.

Adding & Subtracting Fractions With Like Denominators

Guiding Question

How can I show my knowledge of adding and subtracting fractions with like denominators?

Materials

- Anchor Chart Paper
- Examples
- Adding and Subtracting Fractions Scavenger Hunt

Learning Objective

We will add and subtract fractions with like denominators.

L Come together as a class to review what students know about adding and subtracting fractions with like denominators. Record students' thinking on the anchor chart paper. Be sure to review how the numerator changes while the denominator stays the same as well as how to convert an improper fraction to a mixed number and a mixed number to an improper fraction.

e For practice, students will complete the Adding and Subtracting Fractions Scavenger Hunt. To perform the scavenger hunt hang the question cards around the room for students to search for. If you have a large class, make two or more copies of the question cards on different colored paper and assign groups of students to each color. Students will seek out the cards and then solve the problem.

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Small Group Ideas

Using student white boards or math journals, have students practice adding and subtracting fractions with like denominators as well as converting mixed numbers to improper fractions and vice versa.

Addition & Subtraction

Guiding Question

How can I show my prior knowledge of addition and subtraction.

Materials

- Anchor Chart Paper
- Word Problem Examples
- Addition and Subtraction Partner Coach

Learning Objective

We will add and subtract whole numbers and decimals to the hundredths place.

- L** As a class review the process for adding and subtracting whole numbers and decimals including lining up place value, filling in any missing place values with zeros, dropping the decimal and then performing the operation.
- S** Together, take a look at Word Problem #1. Identify the important information and model how to solve. Repeat the process with Word Problems #2 & #3 answering any student questions as you go.
- S** For practice, students will complete the Addition and Subtraction Partner Coach.

Small Group Ideas

Using student white boards or math journals, have students continue to practice adding and subtracting whole numbers and decimals. Some students may need continued practice with “naked numbers” before moving onto problem solving situations.

MULTIPLICATION

Guiding Question

How can I show my prior knowledge of multiplication?

Materials

- Anchor Chart Paper
- Multiplication Word Problems

Learning Objective

We will use strategies to multiply up to a four-digit number by a one-digit number and a two-digit number by a two-digit number.

- L** Using the anchor chart paper, review the different strategies for multiplication including the standard algorithm, partial products, and area models.
- e** Using student whiteboards or math notebooks practice a few multiplication problems with "naked numbers." If necessary, go step by step to review the process. Talk as a class about which strategy is the most efficient and effective.
- S**
- S**
- O** For practice, students will complete a multiplication word problem with a partner and explain their process on a poster. Posters can then be displayed around the room for a gallery walk.
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Small Group Ideas

Using student white boards or math journals, continue to practice multiplication strategies. Encourage students to try multiple strategies for each equation and establish which strategy is the most efficient and effective.

Division

Guiding Question

How can I show my prior knowledge of division?

Materials

- Anchor Chart Paper
- Create Your Own Division Problem
- Division Equations Slips

Learning Objective

We will use strategies including the algorithm to divide up to a four-digit dividend by a one-digit divisor.

- L** Using the anchor chart paper, review the different strategies for division including the standard algorithm, partial quotients, and area models.
- e** Using student whiteboards or math notebooks practice a few division problems with “naked numbers.” If necessary, go step by step to review the process.
- S** For practice, students will draw a division equation slip and create their own word problem based on the equation showing at least two ways to solve. These problems can then be hung around the classroom for students to solve in their math notebooks.
- S**
- O**
- n**

Small Group Ideas

Using student white boards or math journals, have students continue to practice solving division problems with multi-digit dividends and single digit divisors. Encourage students to use multiple strategies to check their own work.

MULTI-STEP PROBLEM SOLVING

Guiding Question

How can I show my prior knowledge of solving multi-step problems?

Materials

- Anchor Chart Paper
- Multi-Step Problem Examples
- Multi-Step Mystery Draw Problems

Learning Objective

We will solve multi-step word problems using all four operations.

- L** As a class, read the first multi-step problem example. Talk through how to pick out the important information, the process to solve, and then solve together showing the steps you use.
- S** Using student whiteboards or math notebooks have students solve the next multi-step problem and discuss it with a partner before going over it as a class.
- S** For practice, students will complete the Multi-Step Problem Mystery Draw activity. For larger classes, copy additional sets of problems on different colored paper and assign each group of students a color.

Small Group Ideas

Using student whiteboards or math journals, students should continue to practice solving multi-step word problems. Read each problem together and have students list the steps they will take including which operations will be used in what order before solving.

Numerical Patterns

Guiding Question

How can I show my prior knowledge of numerical patterns and input-output tables?

Materials

- Anchor Chart Paper
- Input-Output Table Examples
- Input-Output Operation Sort

Learning Objective

We will represent problems using input-output tables and numerical patterns.

L As a class take a look at the input-output table examples. Have students turn and talk about how to find the rule for each table and then share out. Together, work to extend each of the tables using the anchor chart paper by following the rule.

S For practice, students will complete the Input-Output Operation Sort independently or with a partner. Early finishers can label the rule of each table.

Small Group Ideas

Using student white boards or math journals, give students a rule and have them create an input-output table or numerical pattern to match the rule. Students can also create a table to try and “stump the teacher” when you find the rule.

Perimeter & Area

Guiding Question

How can I show my prior knowledge of how to find perimeter and area?

Materials

- Anchor Chart Paper
- Perimeter & Area Examples
- Scan & Solve
- QR Scanner (not included)

Learning Objective

We will solve problems to find the perimeter and area of a rectangle.

- L** Begin together as a class by listing different scenarios in which you would find perimeter or area. For example, you would find perimeter if asked to frame or fence something and area if asked to find the surface of something like how much grass would take to cover a field. Have students generate as many ideas as they can and add it to a t-chart using the anchor chart paper.
- E** Ask students to remind you of the formula for finding perimeter and area and record this on the anchor chart as well. Show students a math reference chart from your standardized test and talk about where these formulas are located on the chart.
- S** Together, take a look at the rectangle example and work to find the perimeter and area.
- S** For practice, students will complete the Scan and Solve in table groups. Each student should use their own whiteboard or math notebook to answer each problem along the way including drawing a model.

Small Group Ideas

Using student whiteboards or math journals, have students practice finding the area and perimeter of rectangles. Students can take turns generating the dimensions of rectangles and trading to find the perimeter and area.

Geometry

Guiding Question

How can I show my prior knowledge of types of lines and angles?

Materials

- Figure Examples
- Who Am I?

Learning Objective

We will classify two-dimensional figures based on their lines and angles.

- L** As a class take a moment to review the types of special lines and angles. Ask students to name any special lines or angles they know and record their responses on the anchor chart paper along with an example of each.
- E** Make sure to include interesting, parallel, and perpendicular angles as well as acute, right, and obtuse angles.
- S** Together, take a look at the figure examples and discuss the attributes each has. Label each figure's types of lines and angles.
- S** For practice students will play a few rounds of Who Am I? identifying figures based on their lines and angles.

Small Group Ideas

Using student white boards or math journals, have students take turns drawing figures while others identify their figures based on their lines and angles. Go on a visual scavenger hunt around the classroom looking for different types of lines and angles found in everyday objects.

Measuring Angles

Guiding Question

How can I show my prior knowledge of using a protractor to measure an angle?

Materials

- Angle Examples
- Protractors (not included)
- Find Someone Who Can Measure This Angle

Learning Objective

We will use a protractor to measure an angle to the closest degree.

- L** Begin by giving each student a protractor and reviewing how to use it. Create a step by step process for using a protractor using the anchor chart paper. Call on students to give you the steps and add in details as necessary. Steps should include: extending the rays of the angle if necessary, lining up the vertex of the angle in the hole on the protractor, aligning the tickers of the protractor with one of the rays, and counting the degrees in an angle.
- S** Together, take a look at the angle examples and discuss how to find the measure of an angle shown on a protractor, but not lined up with the zero. Strategies may include counting the degrees or using subtraction to find the difference in the location of the two rays.
- S** For practice, students will complete the Find Someone Who Can Measure This Angle activity.

Small Group Ideas

Using student white boards or math journals, have students practice drawing their own angles when given a measurement and then trade with a partner to check their measurements.

Measurement

Guiding Question

How can I show my prior knowledge of measurement concepts?

Materials

- Anchor Chart Paper
- Math Reference Chart (not included)
- Measurement Partner Contest

Learning Objective

We will solve problems that deal with measurement of length, intervals of time, liquid volumes, mass, and money.

L As a class come together to discuss what types of problems you may be asked about measurement. Use the anchor chart number to list them.

e Take a moment to look at the math reference chart your students will have access to during their standardized test. Together, go through each section and point out the important information. Remind students that they will be able to use their chart during the test and should think of it as their best friend. Also, take a moment to review the operations used for measurement conversions. (Big to little you multiply, little to big you divide.)

s Using student white boards or math notebooks have students work with a partner to generate a problem situation involving measurement. Then, have partners trade with another set of partners to solve. Select a couple of problems to be shared out with the class.

s For practice, students will complete the partner contest by completing word problems all about measurement. I like to provide a small prize, such as taking their shoes off or being able to wear a hat, for winners to provide some extra motivation.

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Small Group Ideas

Using student white boards or math journals, have students continue to complete word problems based on measurement with particular emphasis on elapsed time and measurement conversions.

Data & Graphs

Guiding Question

How can I show my prior knowledge of data and graphs?

Materials

- Anchor Chart Paper
- Example Graphs and Tables
- Plot and Table Questions

Learning Objective

We will represent data on a frequency table, dot plot, or stem-and-leaf plot.

L Begin the lesson by reviewing what a frequency table, dot plot, and stem-and-leaf plot are with your class. Ask students if they can name other types of plots, tables, or graphs they may see. Record their responses on the anchor chart paper.

S Use the example graphs and tables to demonstrate each type of graph, plot, or table then one by one using these examples, ask students to generate questions that could be answered using the data. Have several students share out and work together to find the answer to their question.

O For practice, students will work with a partner and assigned table, plot, or graph to generate a one or two-step question that can be answered using the data. After you have reviewed the questions hang them around the room for students to answer in their math notebooks.

Small Group Ideas

Using student white boards or math journals, have students continue to generate and answer questions that can be solved using the available graphs and tables.

Financial Literacy

Guiding Question

How can I show my prior knowledge of financial literacy concepts?

Materials

- Anchor Chart Paper
- Expenses Categories
- Profit Problems

Learning Objective

We will distinguish between fixed and variable expenses.
We will calculate profit in a given situation.

L As a class draw a t-chart labeled with fixed and variable expenses on the anchor chart paper. Tell students that today they will be brainstorming different types of expenses. Explain that fixed expenses are monthly costs that remain the same, while variable expenses change monthly or might be a one-time cost.

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S In groups, students will complete a round of Expenses Categories where they try to name an expense for each letter of the alphabet and label it as a fixed or variable expense. After a given amount of time have each group share out five expenses and whether they are fixed or variable and record them on the anchor chart.

S

O Come back together to talk about profit. Using student whiteboards or math notebook guide students through finding the profit for each given situation, giving students more responsibility with each problem.

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Small Group Ideas

Using student whiteboards or math journals, have students generate situations where they would need to find the profit and trade with a partner to solve.

Assessment

Guiding Question

How can I show my knowledge of 4th grade math concepts?

Materials

- Assessment
- Answer key

Learning Objective

We will apply our knowledge of 4th grade math concepts.

L As a class, come together to review the lessons you have completed throughout the unit and review. Answer any questions that students may have.

e Let students know that today they are going to show what they know about all of the 4th grade math concepts they have learned this year. I prefer to tell students that assessments are for them to show how bright they shine in a given area, and where we need to work a little longer. By keeping it fun, you're letting students know the importance of doing their best, students are less stressed and better able to show what they know.

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n After the assessment, this data can be used to form small groups for possible continued review of the standards.

Small Group Ideas

Use the data from the student assessment to organize groups for remediation in the various math concepts. This data should be compared to the results of individual activities, exit tickets, and other available data.

Answer Key

Place value

Write the number 16.90 in expanded notation.

$$(1 \times 10) + (6 \times 1) + (9 \times 0.1)$$

Fractions

Use a symbol to compare the fraction $\frac{4}{8}$ and $\frac{5}{10}$

=

Decimals

Write the decimal equivalent to the fraction $\frac{8}{10}$.

0.8

Adding and subtracting fractions

$$\frac{4}{8} + \frac{1}{8} = \frac{5}{8}$$

Addition and subtraction

$$101.9 - 99.45 = \mathbf{2.45}$$

Multiplication

$$209 \times 6 = \mathbf{1,254}$$

Division

$$345 \div 5 = \mathbf{69}$$

Models for solving

Create a strip diagram to model the equation $56 + 44 = 100$

100	
56	44

Multi-step Problem Solving

There are 14 boys and 11 girls in a class. Each student has 3 notebooks. How many notebooks do the students have combined?

75 notebooks

Numerical equations

What is the rule for the input/output table shown?

Input	Output
56	43
91	78
117	104

Perimeter and Area

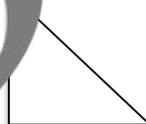
What is the area of a rectangle with a length of 12 and a width of 8?

96 square units

Geometry

Identify the angles shown on the figure.

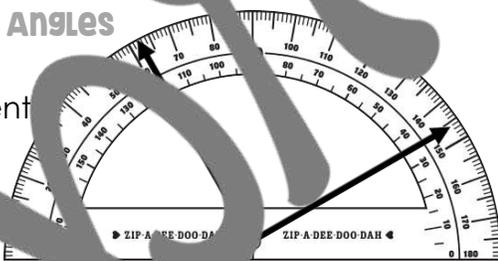
one right angle and two acute angles



Measuring Angles

What is the measurement of the angle?

84°



Measurement

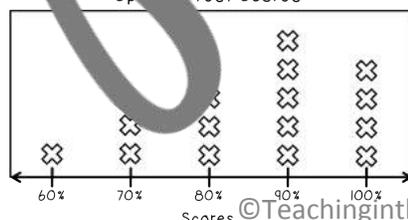
Kendrick made 12 pints of fresh squeezed orange juice. How many quarts does he have?

6 quarts

Data and Graphs

Students who earned a 90% or higher on the spelling test got extra recess. How many students got extra recess?

9 students



Financial Literacy

Jordyn spent \$4.57 on supplies to make lemonade. He sold 16 cups of lemonade for \$1 each. How much profit did he make?

\$11.43