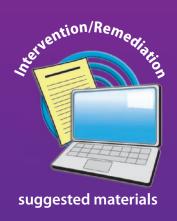


Diagnostic and Placement Tests for Grades K through 8, Algebra 1, Geometry, and Algebra 2



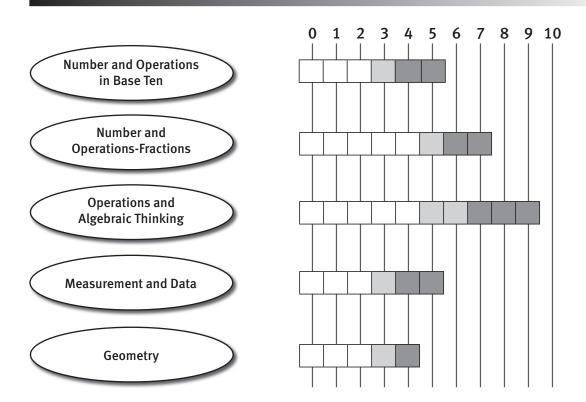








For each part, mark the box under the number of correctly answered questions.



Mark the total number correct below.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28 2	29 3	30
Total																															

Key: Consider this student for...

- Math Triumphs
- Grade 4 Strategic Intervention—See page 45 for materials list.

41

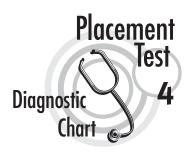
My Math, Grade 4

Stu	dent	t Na	me

In the column on the left, mark the questions that the student answered *incorrectly*.

Domain	Questio Numbe		Objective
	О	1	Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.
	О	2	Use place value understanding to round multi-digit whole numbers to any place.
Number and Operations in	О	3	Multiply a whole number of up to four digits by a one-digit whole number using strategies based on place value and the properties of operations.
Base Ten	О	4	Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.
		5	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.
	О	6	Compare two fractions with different numerators and different denominators.
		7	Explain why a fraction $\frac{a}{b}$ is equivalent to a fraction $\frac{(n \times a)}{(n \times b)}$ 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.
Number and Operations – Fractions	_	8	Explain why a fraction $\frac{a}{b}$ is equivalent to a fraction $\frac{(n \times a)}{(n \times b)}$ 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.
		9	Compare two decimals to hundredths by reasoning about their size.
	<u> </u>	.0	Use decimal notation for fractions with denominators 10 or 100.
	<u> </u>	.1	Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.
	1	.2	Understand a fraction $\frac{a}{b}$ as a multiple of $\frac{1}{b}$.

Domain	Question Number	Objective
	1 3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations.
	1 4	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations.
Operations	1 5	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.
and Algebraic Thinking	□ 16	Represent verbal statements of multiplicative comparisons as multiplication equations.
	<u> </u>	Generate a number or shape pattern that follows a given rule.
	1 8	Generate a number or shape pattern that follows a given rule.
	19	Find all factor pairs for a whole number in the range 1–100.
	20	Generate a number or shape pattern that follows a given rule.
	21	Generate a number or shape pattern that follows a given rule.
	2 2	Use the four operations to solve word problems involving money.
	2 3	Know relative sizes of measurement units within one system of units including km, m, cm.
Measurement and Data	2 4	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.
	2 5	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.
	□ 26	Use the four operations to solve word problems involving intervals of time.
	☐ 27	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.
Geometry	□ 28	Identify angles (right, acute, obtuse) in two-dimensional figures.
	☐ 29	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines.
	30	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.



Student Performance Level	Number of Questions Correct	Suggestions for Intervention and Remediation
Intensive Intervention	0-17	Use <i>Math Triumphs</i> to accelerate the achievement of students who are two or more years below grade level. Students should follow a personalized remediation plan. A variety of materials and instructional methods are recommended. For example, instruction and practice should be provided in print, technology, and hands-on lessons.
Strategic Intervention	18-23	Use the additional Intervention and Remediation materials listed on the next page. This list of materials can provide helpful resources for students who struggle in the traditional mathematics program. Strategic intervention allows students to continue to remain in the <i>My Math</i> program, while receiving the differentiated instruction they need. Teaching Tips and other resources are also listed in the Teacher Edition.
Grade 4	24 or more	Use My Math. This student does not require overall intervention. However, based on the student's performance on the different sections, intervention may be required. For example, a student who missed 2 or more questions in the Measurement and Data section may require extra assistance as you cover these skills throughout the year.

A Special Note About Intervention

When using diagnostic tests, teachers should always question the reason behind the students' scores. Students can struggle with mathematics concepts for a variety of reasons. Personalized instruction is recommended for English language learners, students with specific learning disabilities, students with certain medical conditions, or for those who struggle with traditional instructional practice. Teachers should always consider the needs of the individual student when determining the best approach for instruction and program placement.



Get ConnectED						
Reteach Masters	A brief explanation, along with examples and exercises, for every lesson in the Student Edition (Two pages for Problem-Solving Lessons and one page per lesson for all other lessons) and included in the Chapter Resource Masters					
Self-Check Quizzes	Students can check their understanding for each lesson and email their results to the teacher					
Chapter Readiness Quizzes	Online assessment to use at the beginning of each chapter in the Student Edition					
Personal Tutor	Online instructions for step-by-step solutions for the examples of each lesson in the student textbook					
Math Songs	Collections of songs, raps, and chants					
Strategic Intervention Guide	Additional assessment with follow-up suggestions and activities for remediation					
Additional Technology						
ExamView® Assessment Suite	Networkable software includes a Worksheet Builder to make worksheets and tests, a Student Module to take tests on-screen, and a Management System to keep student records					

Mathematics Chart

LENGTH	TIME					
Metric	1 year = 365 days					
1 meter = 100 centimeters	1 year = 12 months					
1 centimeter = 10 millimeters	1 year = 52 weeks					
Customary	1 week = 7 days					
1 yard = 3 feet	1 day = 24 hours					
1 foot = 12 inches	1 hour = 60 minutes					
	1 minute = 60 seconds					
Perimeter	Area					
square $P = 4s$	rectangle $A = \ell w$ or					
rectangle $P = 2\ell + 2w$ or	A = bh					
$P = 2(\ell + w)$						

Diagnostic and Placement Grade 4

Name Date

This test contains 30 multiple-choice questions. Work each problem in the space on this page. Select the best answer. Write the letter of the answer on the blank at the right.

1 Which set of numbers is in order from least to greatest?

- **A** 4324, 4432, 4243, 4234 **C** 4243, 4234, 4324, 4432
- **B** 4432, 4324, 4243, 4234
- **D** 4234, 4243, 4324, 4432
- **2** To enter a dog show, Tehya must weigh her Great Dane and record his weight rounded to the nearest ten pounds. Tehya's Great Dane weighs 123 pounds. Which weight should Tehya record for the dog show?

- **F** 100 pounds
- **H** 125 pounds
- **G** 120 pounds
- 130 pounds

3 Find the unknown.

$$458 \times 7 = x$$

A 465

C 3,204

B 2,856

D 3,206

Which symbol makes the number sentence 27,543 27,343 true?



- F >
- \mathbf{G} <
- H =
- **J** +

5 Find the unknown.



 $328 \div 6 = y$

- **A** 54 R4
- **B** 54 R2

- **C** 56
- **D** 56 R4
- Marley makes an apple pie and a blueberry pie to serve at Thanksgiving dinner. After dessert, she notices that $\frac{3}{8}$ of the apple pie remains and $\frac{1}{4}$ of the blueberry pie remains. Which statement is TRUE concerning Marley's observation?



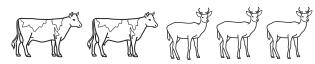




- **F** More apple pie remained than blueberry pie because $\frac{3}{8} > \frac{1}{4}$.
- **G** More blueberry pie remained than apple pie because $\frac{3}{8} > \frac{1}{4}$.
- **H** More apple pie was eaten than blueberry pie because $\frac{3}{8} < \frac{1}{4}$.
- **J** Both pies had the same amount remaining because $\frac{3}{8} = \frac{1}{4}$.

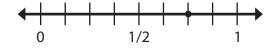
7 What fraction is not equivalent to the fraction of cows in the group of animals?





- **C** $\frac{6}{15}$
- 8 Identify a fraction equivalent to the fraction shown on the number line.





- **9** Which of the following numbers is the greatest?



A 11.6

C 4.63

B 2.09

- **D** 1.17
- **10** Which point could represent 1.65?





- **F** Point *P* **G** Point *Q* **H** Point *R*
- Point S

- On Field Day, Camille hopped on one foot around $\frac{2}{5}$ of the track. Payton hopped on one foot around $\frac{1}{5}$ of the track. Together, how far did they hop around the track on one foot?
- 11

- **A** $\frac{1}{5}$ **B** $\frac{2}{5}$ **C** $\frac{3}{5}$ **D** $\frac{4}{5}$

12 Which of the following number sentences is true about $\frac{8}{5}$?

- $\mathbf{F} \quad \frac{1}{8} + \frac{1}{5} = \frac{8}{5}$
- **H** $\frac{1}{5} \times \frac{1}{8} = \frac{8}{5}$
- **G** $5 \times \frac{1}{8} = \frac{8}{5}$
- **J** $8 \times \frac{1}{5} = \frac{8}{5}$
- 13 Jordan buys twenty-four gumballs at the candy store. On the way home, he chews six gumballs and gives three to his sister. How many gumballs does Jordan have left when he gets home?



- **A** 13
- **B** 14
- **C** 15
- **D** 16

14 Which signs go in the boxes to make the number sentence true?



$$\mathbf{F} \div \mathbf{;} + \mathbf{G} - \mathbf{;} + \mathbf{H} \div \mathbf{;} \times \mathbf{J} - \mathbf{;} \times$$

$$H \div; \times$$









A
$$12 + 4 = \square$$

C
$$12 \times 4 = \Box$$

B
$$12 + 12 + 12 + 12 = \square$$
 D $4 \times 12 = \square$

D
$$4 \times 12 = \Box$$

16 Heather and Matt both collect rocks. Heather says that she has thirty-two rocks in her collection. Matt says that he has three times as many rocks as Heather does. Which number sentence could Heather use to find the number of rocks in Matt's collection?

$$\mathbf{F} \ 32 + 3$$

G
$$32 - 3$$

17 The table below shows the number of crayons in each box. If every box has the same number of crayons, how many crayons will be in 8 boxes?

4 7		

- **A** 8
- **B** 32
- **C** 64
- **D** 72

18 A line of ants is moving across Denise's picnic blanket. She counts 6 legs on the first ant, 12 legs on the first two ants, and 18 legs on the first three ants. If Denise continues to count, how many legs will she count on the first 12 ants?



- The same
- F 24 legs
- **G** 56 legs
- **H** 60 legs
- J 72 legs
- 19 Which factor pair does not belong to 36?

19 _____

A 1, 36

C 6, 6

B 2, 12

- **D** 4, 9
- 20 Hector saves \$5.00 of his allowance every week. After 12 weeks he has \$60.00 saved. Which table could he use to show the amount of money he will save after 20 weeks?

20	

F Week Money Saved 15 \$65.00 16 \$70.00 \$75.00 17 \$80.00 18 19 \$85.00 20 \$90.00

Н	Week	Money Saved
	15	\$75.00
	16	\$80.00
	17	\$85.00
	18	\$90.00
	19	\$95.00
	20	\$100.00

G Week Money Saved \$70.00 15 \$75.00 16 \$80.00 17 \$85.00 18 \$90.00 19 20 \$95.00

_		
J	Week	Money Saved
	15	\$80.00
	16	\$85.00
	17	\$90.00
	18	\$95.00
	19	\$100.00
	20	\$105.00

Level	1	2	3	4	5
Blocks	20	16	12	8	4

Which statement describes the number of blocks on each level of her tower?

- **A** Bianca adds 4 blocks with every level of the tower.
- **B** Bianca adds 6 blocks with every level of the tower.
- **C** Bianca subtracts 6 blocks with every level of the tower.
- **D** Bianca subtracts 4 blocks with every level of the tower.

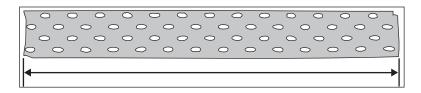
22 Kiyoshi has three quarters, five dimes, and one nickel in her piggy bank. Identify Kiyoshi's total amount of money and the operation used to calculate it.





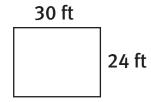
- **F** \$1.10, addition
- **G** \$1.10, subtraction
- **H** \$1.30, addition
- \$1.30, subtraction

23 Measure the length of the ribbon in centimeters. About how long is the ribbon?



- **A** 8 centimeters
- C 10 centimeters
- **B** 9 centimeters
- **D** 11 centimeters
- **24** A classroom is shaped like a rectangle with a length of 30 feet and a width of 24 feet.



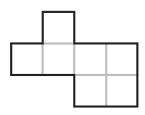


What is the perimeter in feet of the classroom?

- **F** 54 feet
- **G** 84 feet
- **H** 108 feet **J** 720 feet

25 What is the area of this figure?





- = 1 square unit
- A 4 square units
- **C** 7 square units
- **B** 6 square units
- **D** 8 square units

F



Н



G



J



How many lines of symmetry are there in the figure below?

27



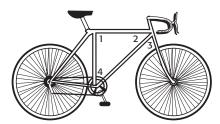
A 0

B 1

C 5

D 10

28 Look at the four angles marked on the picture of a bicycle.



Which angle appears to be a right angle?

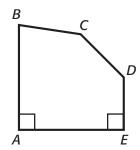
F angle 1

H angle 3

G angle 2

- J angle 4
- **29** The polygon below has two right angles.





Which side of the polygon is parallel to side \overline{AB} ?

A \overline{BC}

C \overline{DE}

B \overline{CD}

D *EA*

- **30** Bella drew an angle that measured 105°. What type of angle did she draw?
 - **F** right

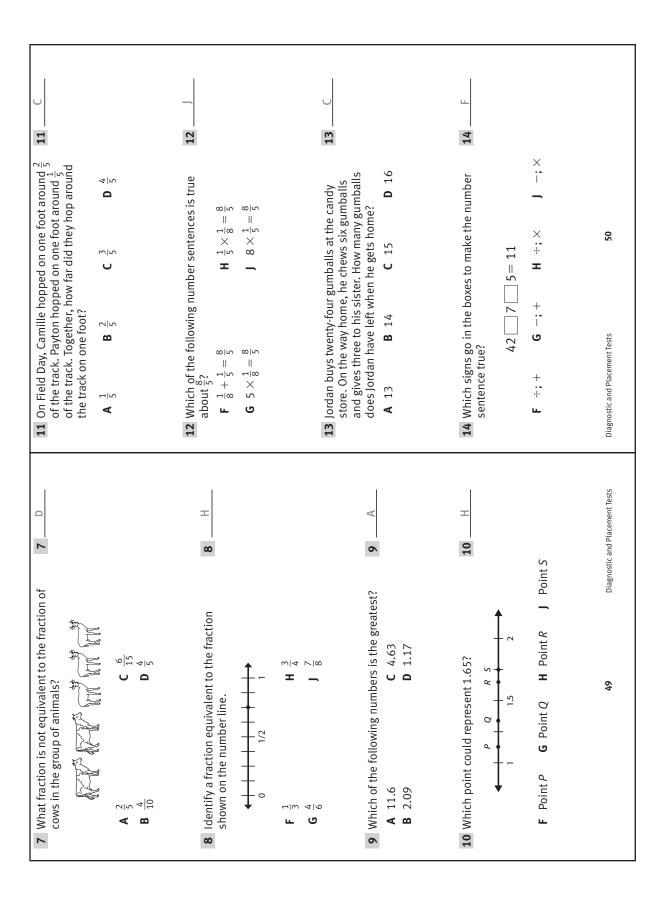
H obtuse

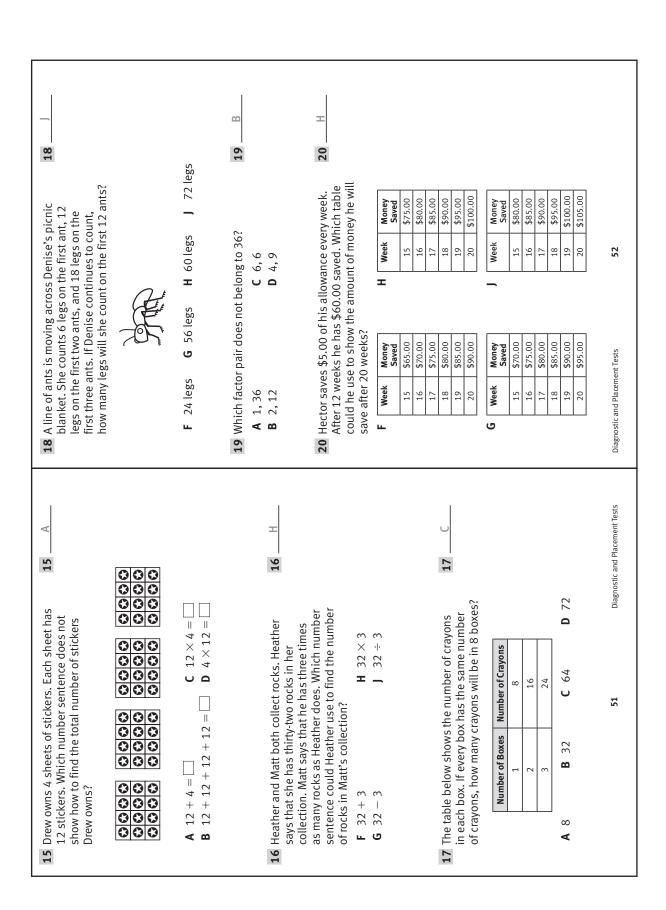
G acute

J straight

Diagnostic and Placement	Name	4 Which symbol makes the number sentence 27,543 27,343 true?
Graue 4 This test contains 30 multiple-choic space on this page. Select the best the blank at the right.	Graue 4 This test contains 30 multiple-choice questions. Work each problem in the space on this page. Select the best answer. Write the letter of the answer on the blank at the right.	F > G < H = J +
 Which set of numbers is in order from least to greatest? A 4324, 4432, 4243, 4234 C 4243, 4 B 4432, 4324, 4243, 4234 D 4234, 4 	der from least C 4243, 4234, 4324, 4432 D 4234, 4243, 4324, 4432	5 Find the unknown.
Great Dane and record his weigh her Great Dane and record his weight rounded to the nearest ten pounds. Tehya's Great Dane weighs 123 pounds. Which weight should Tehya record for the dog show? F 100 pounds H 125 pounds G 120 pounds	ust weigh her 2 G sight rounded to the Sreat Dane eight should w? H 125 pounds J 130 pounds	6 Marley makes an apple pie and a blueberry pie to serve at Thanksgiving dinner. After dessert, she notices that $\frac{3}{8}$ of the apple pie remains and $\frac{1}{4}$ of the blueberry pie remains. Which statement is TRUE concerning Marley's observation?
3 Find the unknown.	3 D	
A 465 B 2,856	C 3,204 D 3,206	F More apple pie remained than blueberry pie because $\frac{8}{8} > \frac{1}{4}$. G More blueberry pie remained than apple pie because $\frac{3}{8} > \frac{1}{4}$. H More apple pie was eaten than blueberry pie because $\frac{3}{8} < \frac{1}{4}$. J Both pies had the same amount remaining because $\frac{3}{8} = \frac{1}{4}$.
47	Diagnostic and Placement Tests	Diagnostic and Placement Tests 48

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H 108 feet **J** 720 feet 23 Measure the length of the ribbon in centimeters. **D** 11 centimeters 10 centimeters What is the perimeter in feet of the classroom? = 1 square unit 24 A classroom is shaped like a rectangle with a length of 30 feet and a width of 24 feet. 24 ft 25 What is the area of this figure? About how long is the ribbon? **G** 84 feet 30 ft **B** 9 centimeters A 8 centimeters **F** 54 feet Ξ Bianca subtracts 6 blocks with every level of the tower. Bianca subtracts 4 blocks with every level of the tower. 22 21 Bianca adds 6 blocks with every level of the tower. Bianca adds 4 blocks with every level of the tower. Which statement describes the number of blocks on Kiyoshi has three quarters, five dimes, and one Bianca is building a tower with wooden blocks. nickel in her piggy bank. Identify Kiyoshi's total She counts the number of blocks on each level amount of money and the operation used to 3 4 and records it in the chart below. 2 each level of her tower? G \$1.10, subtraction 1 20 **F** \$1.10, addition H \$1.30, addition Level Blocks calculate it. 4 B 21 22

工

24

J \$1.30, subtraction

C 7 square unitsD 8 square units

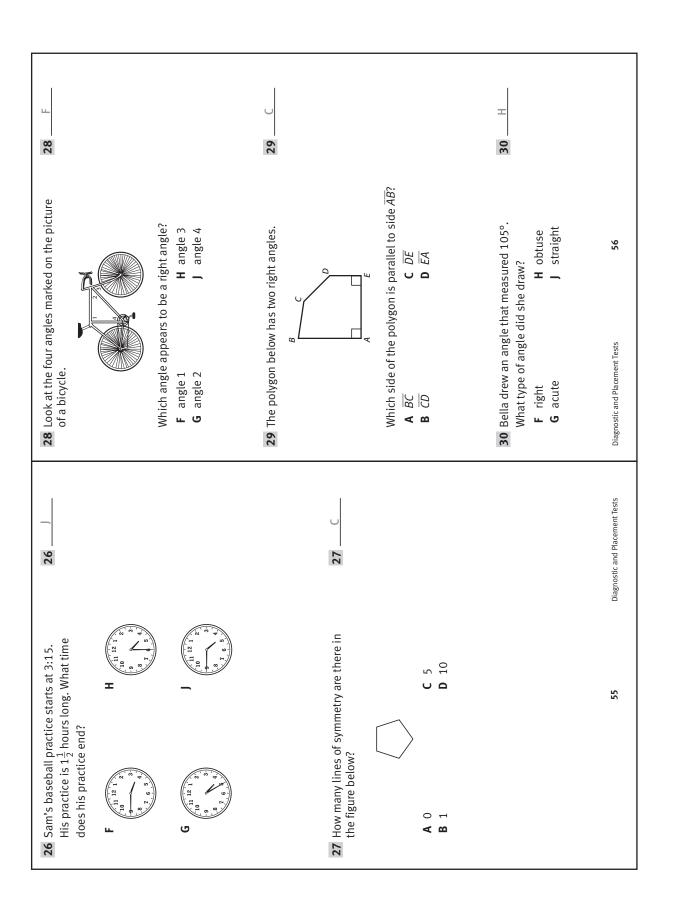
A 4 square unitsB 6 square units

54

Diagnostic and Placement Tests

Diagnostic and Placement Tests

23



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