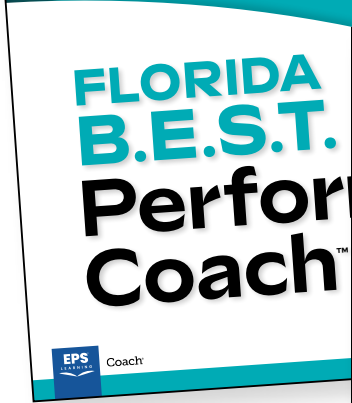
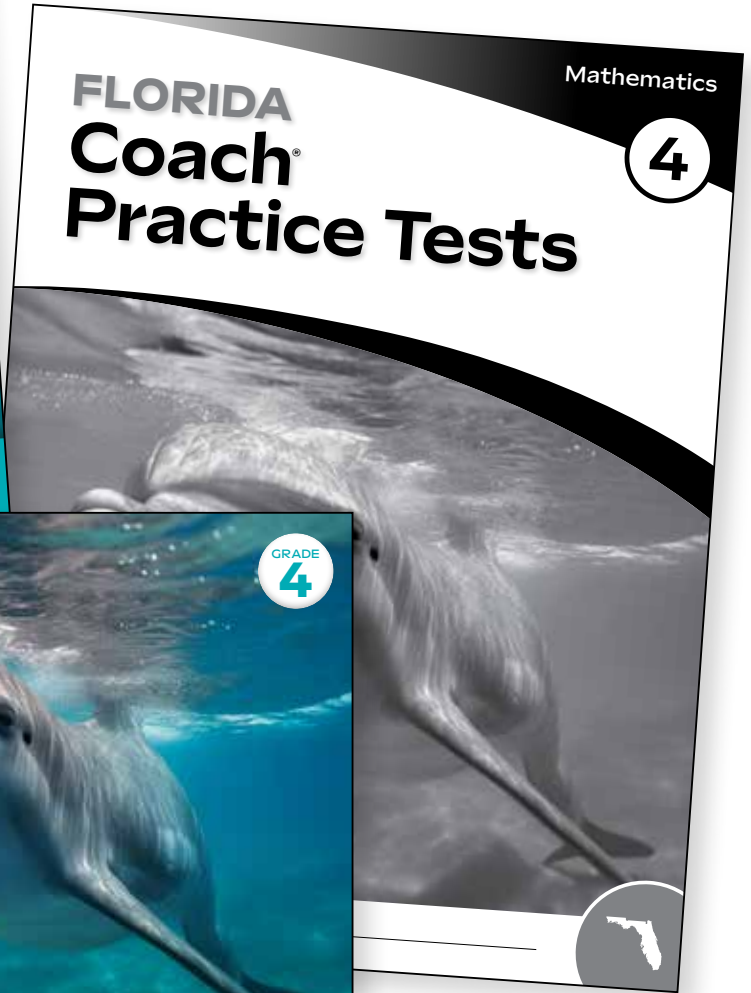


SAMPLER

*Includes a Student Edition lesson and
Practice Tests samples*



CONTENTS

Letter to the Student	1
Lesson 1 Multiplication Equations	2
Lesson 2 Solving Problems with Multiplication and Division	11
Lesson 3 Multi-Step Word Problems	20
Lesson 4 Equations	28
Lesson 5 Interpreting Remainders in Word Problems	35
Lesson 6 Factor Pairs	43
Lesson 7 Number Patterns	54
Lesson 8 Understanding Place Value for Whole Numbers	62
Lesson 9 Comparing and Ordering Whole Numbers	71
Lesson 10 Rounding Whole Numbers	81
Lesson 11 Multiplying Whole Numbers	88
Lesson 12 Dividing Whole Numbers	98
Lesson 13 Equivalent Fractions	110
Lesson 14 Comparing and Ordering Fractions	118
Lesson 15 Decomposing Fractions and Mixed Numbers	132
Lesson 16 Adding and Subtracting Fractions	140
Lesson 17 Adding and Subtracting Mixed Numbers	148
Lesson 18 Solving Problems with Fractions	157
Lesson 19 Multiplying Whole Numbers and Fractions	165
Lesson 20 Solving Problems: Multiplying Whole Numbers and Fractions	175
Lesson 21 Adding Fractions with Denominators of 10 and 100	184
Lesson 22 Understanding Decimals	191
Lesson 23 Comparing and Ordering Decimals	201
Lesson 24 Adding and Subtracting Decimals	212
Lesson 25 Units of Measure	222
Lesson 26 Converting Customary Units of Measure	236
Lesson 27 Converting Metric Units of Measure	245
Lesson 28 Solving Problems with Time and Distance	253
Lesson 29 Understanding Angles	260

Lesson 30	Measuring and Drawing Angles.....	271
Lesson 31	Adding and Subtracting Angle Measures.....	279
Lesson 32	Perimeter and Area.....	287
Lesson 33	Line Plots.....	297
Lesson 34	Stem-and-Leaf Plots.....	308
Lesson 35	Mode, Median, and Range.....	320
Glossary	330

Duplicating any part of this book is prohibited by law. © EPS Operations, LLC

Equations

1 GETTING THE IDEA

An **equation** is a mathematical statement that has an equal sign between two **expressions** having the same value.

Look at these three equations.

$$97 - 34 = 82 - 19$$

$$38 + 18 = 8 \times 7$$

$$12 \times 3 = 72 \div 2$$

To determine if the two expressions in each equation have the same value, perform the operation on each side of the equal sign.

$$97 - 34 = 63$$

$$38 + 18 = 56$$

$$12 \times 3 = 36$$

$$82 - 19 = 63$$

$$8 \times 7 = 56$$

$$72 \div 2 = 36$$

$$63 = 63$$

$$56 = 56$$

$$36 = 36$$

The values are the same.

When the values on each side of the equal sign of an equation are the same, it is a true equation. An equation is false if the two values are not equal.

Is the equation $24 + 7 = 6 \times 5$ true or false?

Find the value of the two expressions.

$$24 + 7 = 31 \text{ and } 6 \times 5 = 30$$

31 is not equal to 30.

So, $24 + 7 = 6 \times 5$ is a false equation.

Example 1

Tell whether each equation is *true* or *false*.

$$18 \times 3 = 9 \times 6$$

$$45 - 6 = 3 \times 12$$

$$63 \div 7 = 3 + 6$$

Strategy Solve the expression on each side of the equation, then compare the two values.

Step 1

Perform the operation on each side of the equal sign.

$$18 \times 3 = 9 \times 6 \quad 18 \times 3 = \mathbf{54} \text{ and } 9 \times 6 = \mathbf{54}$$

$$45 - 6 = 3 \times 12 \quad 45 - 6 = \mathbf{39} \text{ and } 3 \times 12 = \mathbf{36}$$

$$63 \div 7 = 3 + 6 \quad 63 \div 7 = \mathbf{9} \text{ and } 3 + 6 = \mathbf{9}$$

Step 2

Compare the values of the expressions in each equation.

$$54 = 54$$

39 is not equal to 36.

$$9 = 9$$

Solution The equations $18 \times 3 = 9 \times 6$ and $63 \div 7 = 3 + 6$ are true equations.
The equation $45 - 6 = 3 \times 12$ is false.

Sometimes a symbol or letter may represent a missing, or unknown, number within an equation. One way to find the missing number is to use opposite operations.

Example 2

What number makes this equation true?

$$54 \div 6 = \square - 31$$

Strategy

First, solve the side of the equation without the unknown. Then use opposite operations to find the unknown number.

Step 1

Solve the expression on the left side of the equation.

$$54 \div 6 = 9$$

Step 2

For the expression on the right, use the opposite operation of subtraction, which is addition.

Add 31 to each side. This leaves the unknown number by itself on one side of the equal sign.

$$9 + \mathbf{31} = \square + (\mathbf{31} - 31) \quad \text{Any number minus itself equals 0.}$$

$$40 = \square + 0$$

$$40 = \square$$

Step 3

Write the unknown number in the equation.

$$54 \div 6 = 40 - 31$$

Step 4

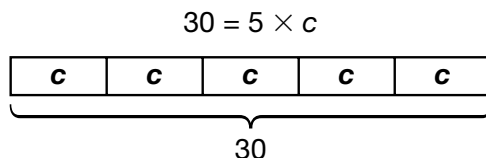
Check your work by replacing 40 in the box from the original equation.

$$54 \div 6 = \mathbf{9} \quad 40 - 31 = \mathbf{9}$$

$$9 = 9$$

Solution The number 40 makes the equation true: $54 \div 6 = 40 - 31$.

A **bar diagram** can be a helpful way to visualize a word problem when writing an equation to solve it.



Chelsea babysat for 5 hours and earned \$30. How much did Chelsea earn per hour?

Since the total amount of Chelsea's earnings is \$30, the whole bar represents 30.

Each section represents 1 hour.

The letter c represents the unknown: Chelsea's earnings per hour.

The multiplication equations $30 = 5 \times c$ or $5 \times c = 30$ represent the problem.

Example 3

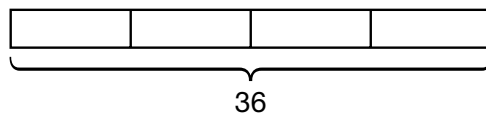
Seth bought 4 bushes. He spent \$36. Each bush costs the same amount. What was the price of each bush?

Strategy Draw a bar diagram to represent the problem. Then write and solve an equation.

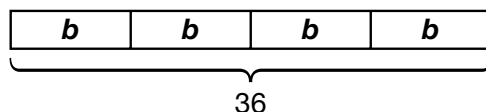
Step 1

Draw a rectangle to represent the total amount or whole, \$36.00.

Divide it into 4 equal sections to represent each bush.

**Step 2**

Label each section of the rectangle b . The letter b represents the cost of each bush.



Step 3 Write an equation that represents the problem.

$$36 = 4 \times b$$

Step 4 To find the value of b , use the opposite operation of multiplication, or division, to solve the equation.

$$36 \div 4 = (4 \div 4) \times b \quad \text{Any number divided by itself is equal to 1.}$$

$$9 = 1 \times b$$

$$9 = b$$

The value of b is 9. Seth paid \$9 for each bush.

Solution The price of each bush was \$9.00.

2 COACHED EXAMPLE

Solve the word problem below.

Mari planted 54 tomato seedlings in her garden. This is 6 times as many as the number of pepper seedlings she planted. How many pepper seedlings, p , did Mari plant?

What is the unknown in the problem? _____

What letter will represent the unknown in the equation? _____

What operation can be used to solve the problem? _____

Write the equation. _____

Solve the equation. _____

Mari planted _____ pepper seedlings.

3 LESSON PRACTICE

1 Which is a true equation?

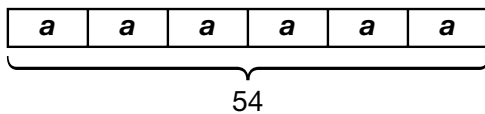
- A. $6 \times 3 = 12 + 14$
- B. $14 + 18 = 4 \times 8$
- C. $26 - 10 = 3 \times 5$
- D. $48 \div 8 = 2 + 6$

2 If the equation below is true, what is the value of y ?

$$72 \div y = 28 - 19$$

- A. 81
- B. 47
- C. 9
- D. 8

3 Which equation does the bar diagram represent?



- A. $54 + a = 6$
- B. $6 \times 54 = a$
- C. $a \times 6 = 54$
- D. $54 - 6 = a$

4 If the value of s is 16, which of these equations are true?

- A. $9 \times 3 = 56 - s$
- B. $64 \div s = 1 + 15$
- C. $35 + s = 3 \times 17$
- D. $93 - 43 = s + 24$

5 Jaime saved \$8 a week for m weeks until she had saved \$56. Which equation can **not** be used to find the number of weeks, m , that Jaime saved \$8?

- A. $56 \div 8 = m$
- B. $8 + m = 56$
- C. $m \times 8 = 56$
- D. $56 \div m = 8$

6 Javier distributed 48 sheets of construction paper equally among 6 tables. He placed k sheets on each table. Which equation can be used to find the value of k ?

- A. $k + 6 = 48$
- B. $48 - k = 6$
- C. $k \div 6 = 48$
- D. $6 \times k = 48$

7 The equation $54 \div 3 = 4 \times 4$ is a equation.

8 Is the equation true? Check *yes* or *no*.

	$63 \div 7 = 29 - 10$	$38 + 43 = 9 \times 9$	$5 \times 8 = 52 - 12$	$94 - 28 = 10 \times 6$
Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9 Write the number to make each equation true.

$$36 + \boxed{} = 4 \times 10$$

$$9 \times 6 = 72 - \boxed{}$$

$$\boxed{} \div 7 = 63 \div 9$$

10 Write and solve an equation for the word problem below.

Troy spent \$32 on p T-shirts. Each T-shirt cost \$8. How many T-shirts did Troy buy?

- 11 Angie picked 27 apples. This was three times as many apples as Malcolm picked. How many apples did Malcolm pick?

Complete each sentence.

The equation represents the problem.

Malcolm picked apples.

- 12 Fiona spent d dollars on tickets to the movies. She bought 4 tickets. Each ticket cost \$6. How much did Fiona spend on all four tickets?

Part A

In this problem, d represents .

Part B

Write an equation to represent the problem. Use d to represent the unknown.

Part C

Solve the equation and the problem.

$$d = \text{$$

Fiona spent on the tickets.

STANDARDS CORRELATIONS

Florida B.E.S.T. Standards Correlation Chart

The following table matches the standards to the lessons in which they are addressed.

Standard	Grade 4	Lesson(s)
Number Sense and Operations		
Understand place value for multi-digit numbers.		
MA.4.NSO.1.1	Express how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right.	8
MA.4.NSO.1.2	Read and write multi-digit whole numbers from 0 to 1,000,000 using standard form, expanded form and word form.	8
MA.4.NSO.1.3	Plot, order and compare multi-digit whole numbers up to 1,000,000.	9
MA.4.NSO.1.4	Round whole numbers from 0 to 10,000 to the nearest 10, 100 or 1,000.	10
MA.4.NSO.1.5	Plot, order and compare decimals up to the hundredths.	22, 23
Build an understanding of operations with multi-digit numbers including decimals.		
MA.4.NSO.2.1	Recall multiplication facts with factors up to 12 and related division facts with automaticity.	11, 12
MA.4.NSO.2.2	Multiply two whole numbers, up to three digits by up to two digits, with procedural reliability.	11
MA.4.NSO.2.3	Multiply two whole numbers, each up to two digits, including using a standard algorithm with procedural fluency.	11
MA.4.NSO.2.4	Divide a whole number up to four digits by a one-digit whole number with procedural reliability. Represent remainders as fractional parts of the divisor.	12
MA.4.NSO.2.5	Explore the multiplication and division of multi-digit whole numbers using estimation, rounding and place value.	11, 12
MA.4.NSO.2.6	Identify the number that is one-tenth more, one-tenth less, one-hundredth more and one-hundredth less than a given number.	22
MA.4.NSO.2.7	Explore the addition and subtraction of multi-digit numbers with decimals to the hundredths.	24
Fractions		
Develop an understanding of the relationship between different fractions and the relationship between fractions and decimals.		
MA.4.FR.1.1	Model and express a fraction, including mixed numbers and fractions greater than one, with the denominator 10 as an equivalent fraction with the denominator 100.	21
MA.4.FR.1.2	Use decimal notation to represent fractions with denominators of 10 or 100, including mixed numbers and fractions greater than 1, and use fractional notation with denominators of 10 or 100 to represent decimals.	22
MA.4.FR.1.3	Identify and generate equivalent fractions, including fractions greater than one. Describe how the numerator and denominator are affected when the equivalent fraction is created.	13
MA.4.FR.1.4	Plot, order and compare fractions, including mixed numbers and fractions greater than one, with different numerators and different denominators.	14

Standard	Grade 4	Lesson(s)
Build a foundation of addition, subtraction and multiplication operations with fractions.		
MA.4.FR.2.1	Decompose a fraction, including mixed numbers and fractions greater than one, into a sum of fractions with the same denominator in multiple ways. Demonstrate each decomposition with objects, drawings and equations.	15
MA.4.FR.2.2	Add and subtract fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability.	16, 17
MA.4.FR.2.3	Explore the addition of a fraction with denominator of 10 to a fraction with denominator of 100 using equivalent fractions.	21
MA.4.FR.2.4	Extend previous understanding of multiplication to explore the multiplication of a fraction by a whole number or a whole number by a fraction.	19
Algebraic Reasoning		
Represent and solve problems involving the four operations with whole numbers and fractions.		
MA.4.AR.1.1	Solve real-world problems involving multiplication and division of whole numbers including problems in which remainders must be interpreted within the context.	1, 2, 3, 5
MA.4.AR.1.2	Solve real-world problems involving addition and subtraction of fractions with like denominators, including mixed numbers and fractions greater than one.	18
MA.4.AR.1.3	Solve real-world problems involving multiplication of a fraction by a whole number or a whole number by a fraction.	20
Demonstrate an understanding of equality and operations with whole numbers.		
MA.4.AR.2.1	Determine and explain whether an equation involving any of the four operations with whole numbers is true or false.	4
MA.4.AR.2.2	Given a mathematical or real-world context, write an equation involving multiplication or division to determine the unknown whole number with the unknown in any position.	2, 4
Recognize numerical patterns, including patterns that follow a given rule.		
MA.4.AR.3.1	Determine factor pairs for a whole number from 0 to 144. Determine whether a whole number from 0 to 144 is prime, composite or neither.	6
MA.4.AR.3.2	Generate, describe and extend a numerical pattern that follows a given rule.	7
Measurement		
Measure the length of objects and solve problems involving measurement.		
MA.4.M.1.1	Select and use appropriate tools to measure attributes of objects.	25
MA.4.M.1.2	Convert within a single system of measurement using the units: yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liter, milliliter; and hours, minutes, seconds.	26, 27
Solve problems involving time and money.		
MA.4.M.2.1	Solve two-step real-world problems involving distances and intervals of time using any combination of the four operations.	28
MA.4.M.2.2	Solve one- and two-step addition and subtraction real-world problems involving money using decimal notation.	24

Standard	Grade 4	Lesson(s)
Geometric Reasoning		
Draw, classify and measure angles.		
MA.4.GR.1.1	Informally explore angles as an attribute of two-dimensional figures. Identify and classify angles as acute, right, obtuse, straight or reflex.	29
MA.4.GR.1.2	Estimate angle measures. Using a protractor, measure angles in whole-number degrees and draw angles of specified measure in whole-number degrees. Demonstrate that angle measure is additive.	30, 31
MA.4.GR.1.3	Solve real-world and mathematical problems involving unknown whole-number angle measures. Write an equation to represent the unknown.	31
Solve problems involving the perimeter and area of rectangles.		
MA.4.GR.2.1	Solve perimeter and area mathematical and real-world problems, including problems with unknown sides, for rectangles with whole-number side lengths.	11, 32
MA.4.GR.2.2	Solve problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters.	32
Data Analysis and Probability		
Collect, represent and interpret data and find the mode, median and range of a data set.		
MA.4.DP.1.1	Collect and represent numerical data, including fractional values, using tables, stem-and-leaf plots or line plots.	33, 34, 35
MA.4.DP.1.2	Determine the mode, median or range to interpret numerical data including fractional values, represented with tables, stem-and-leaf plots or line plots.	35
MA.4.DP.1.3	Solve real-world problems involving numerical data.	33, 34
Mathematical Thinking and Reasoning Standards		
MA.K12.MTR.1.1	Actively participate in effortful learning both individually and collectively.	covered throughout the program
MA.K12.MTR.2.1	Demonstrate understanding by representing problems in multiple ways.	
MA.K12.MTR.3.1	Complete tasks with mathematical fluency.	
MA.K12.MTR.4.1	Engage in discussions that reflect on the mathematical thinking of self and others.	
MA.K12.MTR.5.1	Use patterns and structure to help understand and connect mathematical concepts.	
MA.K12.MTR.6.1	Assess the reasonableness of solutions.	
MA.K12.MTR.7.1	Apply mathematics to real-world contexts.	

Mathematics

4

FLORIDA Coach[®] Practice Tests



Coach

Name: _____



PRACTICE TESTS SAMPLES

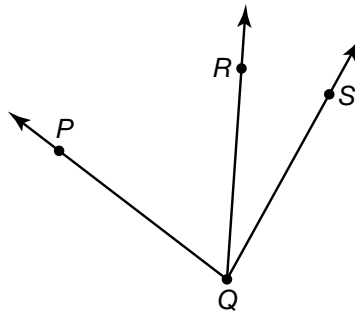
26. Select all the ways to correctly represent the number 60,218.

- (A) $6 \times 10,000 + 2 \times 100 + 1 \times 10 + 8$
- (B) $6 \times 10,000 + 2 \times 1,000 + 1 \times 100 + 8 \times 80$
- (C) sixty thousand, two hundred eighteen
- (D) six thousand, two hundred eighteen
- (E) $6 \times 10,000 + 1,000 + 2 \times 100 + 10 + 8$

27. What is $1,625 \div 5$?

Write your response in the shaded box below.

28. $\angle PQS$ has a measure of 89° . $\angle SQR$ has a measure of 31° .



What is the measure, in **degrees**, of $\angle PQR$?

Write your response in the shaded box below.

Go On 

29. What is the missing addend in the equation below?

$$\frac{6}{10} + \square = \frac{65}{100}$$

- (A) $\frac{5}{10}$
- (B) $\frac{5}{60}$
- (C) $\frac{5}{100}$
- (D) $\frac{59}{100}$

30. Which statement correctly compares 985,320 and 958,023?

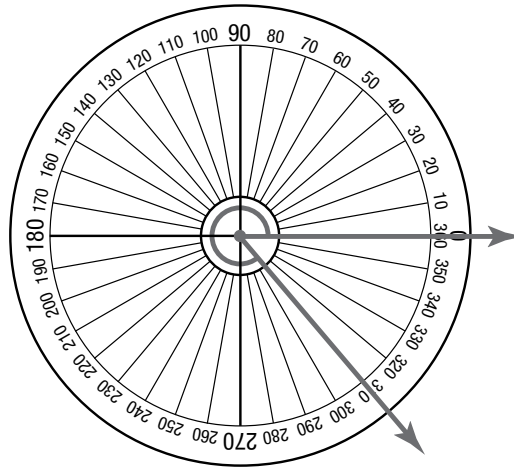
- (A) $958,023 = 985,320$
- (B) $958,023 > 985,320$
- (C) $985,320 < 985,023$
- (D) $985,320 > 985,023$

31. How many times greater is the value of 7 in 271,461 than the value of 7 in 927,645?

Write your response in the shaded box below.

Go On 

32. An angle is shown.



What is the measure, in **degrees**, of the angle?
Write your response in the shaded box below.

33. Which equation gives the BEST whole number estimate for $2,965 \div 37$?

- (A) $2,700 \div 30 = 90$
- (B) $2,800 \div 40 = 70$
- (C) $3,000 \div 30 = 100$
- (D) $3,000 \div 40 = 75$

34. This problem has **two** parts.

Terry wants to find fractions that are equivalent to $\frac{3}{4}$.

Part A

Which fraction can Terry multiply $\frac{3}{4}$ by to get an equivalent fraction?

- (A) $\frac{1}{2}$
- (B) $\frac{3}{4}$
- (C) $\frac{2}{2}$
- (D) $\frac{2}{1}$

Part B

Which fraction is equivalent to $\frac{3}{4}$?

- (A) $\frac{75}{100}$
- (B) $\frac{11}{12}$
- (C) $\frac{12}{9}$
- (D) $\frac{4}{3}$

35. Damian draws a line that is 8 meters long. Idris draws a line that is 400 centimeters long.

Select all the statements about the measurements that are true.

- (A) Damian's line is 800 centimeters long.
- (B) Idris's line is 4,000 millimeters long.
- (C) Damian's line is longer than Idris's line.
- (D) Idris's line is longer than Damian's line.
- (E) Damian's line is 80 millimeters long.

Go On 



FLORIDA B.E.S.T. Performance Coach™

GRADES
3-8

