



GRADE

5

New York State

Mathematics

**Sample
Lesson**

Continental Press

Contents

Introduction to New York State Mathematics 5.	5
Understanding Mathematical Processes	7
Unit 1: Whole Numbers and Fractions	
Lesson 1 Place Value and Whole Numbers	13
Lesson 2 Equivalent Fractions	17
Lesson 3 Comparing and Ordering Fractions	21
Whole Numbers and Fractions Review.	25
Unit 2: Decimals and Percents	
Lesson 1 Decimals	29
Lesson 2 Comparing Decimals	33
Lesson 3 Percents	37
Lesson 4 Ratios	41
Decimals and Percents Review	45
Unit 3: Number Theory	
Lesson 1 Primes and Composites	49
Lesson 2 Factors and Multiples	53
Lesson 3 Order of Operations	57
Number Theory Review	61
Unit 4: Operations	
Lesson 1 Multiplying Three-Digit Numbers	65
Lesson 2 Dividing Three-Digit Numbers	69
Lesson 3 Renaming Fractions and Mixed Numbers	73
Lesson 4 Adding and Subtracting Fractions and Mixed Numbers	77
Lesson 5 Operations with Decimals	81
Operations Review.	85
Unit 5: Estimation	
Lesson 1 Rounding and Whole Number Estimation	89
Lesson 2 Estimating with Fractions	93
Lesson 3 Estimating with Decimals.	97

Estimation Review	101
Unit 6: Algebra	
Lesson 1 Variables and Expressions	105
Lesson 2 Evaluating Expressions	109
Lesson 3 Solving Equations	113
Lesson 4 Numeric and Geometric Patterns	117
Algebra Review	121
Unit 7: Geometry, Part 1	
Lesson 1 Angles	125
Lesson 2 Quadrilaterals	129
Lesson 3 Triangles	133
Lesson 4 Perimeter	137
Geometry, Part 1 Review	141
Unit 8: Geometry, Part 2	
Lesson 1 Congruent Figures	145
Lesson 2 Similar Figures	149
Lesson 3 Symmetry	153
Lesson 4 Coordinate Planes	157
Geometry, Part 2 Review	161
Unit 9: Length, Weight, and Capacity	
Lesson 1 Customary Units of Length	165
Lesson 2 Metric Units of Length	169
Lesson 3 Converting Measurements of Weight and Capacity	173
Lesson 4 Elapsed Time	177
Lesson 5 Estimating Measurements	181
Length, Weight, and Capacity Review	185
Unit 10: Statistics and Probability	
Lesson 1 Statistics	189
Lesson 2 Line Graphs	193
Lesson 3 Probability	197
Statistics and Probability Review	201

Operations with Decimals

Indicator 5.N.23

- ✔ **Add or subtract decimals** the same way you add or subtract whole numbers, from right to left. Line up the decimal points first, adding placeholder zeros if necessary. Then add or subtract the same places: tenths to tenths, hundredths to hundredths, and so on.

$$4.93 + 5.675 = ? \qquad 17.145 - 8.7 = ?$$

$$\begin{array}{r} 4.930 \\ +5.675 \\ \hline 10.605 \end{array} \qquad \begin{array}{r} 17.145 \\ -8.700 \\ \hline 8.445 \end{array}$$

- ✔ **Multiply decimals** the same way you multiply whole numbers. The product will have the same number of decimal places as the sum of the number of places in the factors.

$$7.29 \times 6.42 =$$

$$\begin{array}{r} 7.29 \\ \times 6.42 \\ \hline 1458 \\ 29160 \\ +437400 \\ \hline 46.8018 \end{array}$$

- ✔ **Divide decimals** the same way you divide whole numbers. Place the decimal point in the quotient above the decimal point in the dividend.

$$34.95 \div 5 =$$

$$\begin{array}{r} 6.99 \\ 5 \overline{)34.95} \\ \underline{30} \\ 49 \\ \underline{45} \\ 45 \\ \underline{45} \\ 00 \end{array}$$

Remember—

Use **estimation** to determine if an answer seems reasonable.

Multiplication and division are inverse operations.

$$5 \overline{)3.54}$$

Think: 5 times what number is 3.5?

$$\begin{array}{r} \text{Quotient} \\ \downarrow \\ 0.6 \\ 8 \overline{)4.8} \\ \uparrow \quad \uparrow \\ \text{Divisor} \quad \text{Dividend} \end{array}$$

$$\begin{array}{r} \text{Dividend} \quad \text{Quotient} \\ \downarrow \quad \downarrow \\ 4.8 \div 8 = 0.6 \\ \uparrow \\ \text{Divisor} \end{array}$$

Dollars and cents are a form of decimal numbers.

$$\begin{array}{r} \text{Ones} \quad \text{Hundredths} \\ \downarrow \quad \downarrow \\ \$4.56 \\ \uparrow \\ \text{Tenths} \end{array}$$

You can write a whole number in decimal form by adding a decimal point and as many zeros as needed.

$$3 = 3.0 = 3.00 = 3.000$$



Read each problem. Circle the letter of the best answer.

1 What is the sum of $4.98 + 3.7 + 6.381$?

- A 0.15061 C 15.061
B 1.5061 D 150.61

The correct answer is C. The addends have different numbers of places, so add placeholder zeros to make them easier to add. Line them up and add from the right.

$$\begin{array}{r} 21 \\ 4.980 \\ 3.700 \\ +6.381 \\ \hline 15.061 \end{array}$$

The sum is 15.061.

2 Tomatoes are being sold for \$1.89 per pound. How much would 5 pounds of tomatoes cost?

- A \$5.05 C \$19.55
B \$9.45 D \$54.45

3 Tim had a box containing 0.453 kilogram (kg) of salt. He used 0.26 kilogram of the salt for a science experiment. How much salt was left in the box?

- A 0.183 kg C 0.427 kg
B 0.193 kg D 0.437 kg

4 A group of 9 rocks weigh a total of 35.91 pounds. How much does each rock weigh?

- A 0.399 pound
B 3.99 pounds
C 39.9 pounds
D 399 pounds

5 Ms. James bought 3 world maps for her classroom. The maps cost \$24.59 each. What was the total cost of the 3 maps (before tax)?

- A \$72.77
B \$73.57
C \$73.77
D \$83.57

6 The athletes competing in a triathlon race will bicycle 15.9 miles, swim 0.75 mile, and run 6.57 miles. What will be the total length of the race?

- A 21.12 miles
B 21.22 miles
C 23.12 miles
D 23.22 miles

7 Janis collected donations for a charity from 26 people in her neighborhood. She collected \$202.61. What was the average contribution per person?

- A \$5 C \$7
B \$6 D \$8

8 Find the product.

$$0.8 \times 63.2 = \square$$

- A 5.056
B 50.56
C 64.0
D 505.6



Read each problem. Write your answers.

- 9 Sophora has a total of 30 feet of lumber for a project. If Sophora uses 6.7 feet for the first part of the project and 8.95 feet for the second part, how much lumber is left?

Show your work.

$$\begin{array}{r} 8.95 \\ +6.70 \\ \hline 15.65 \end{array} \qquad \begin{array}{r} 30.00 \\ -15.65 \\ \hline 14.35 \end{array}$$

Answer: 14.35 feet

Explain how you found your answer.

First, add 6.7 and 8.95 to find how many feet of lumber Sophora used for both parts of her project. Then subtract this sum from 30 to find how many feet of lumber are left.

- 10 The set director for a community play bought 66 yards of fabric and spent \$379.50 (before tax). How much was the cost per yard?

Show your work.

Answer: \$ _____

Explain how you found your answer.



Read the problem. Write your answer for each part.

- 11 One rainy day, a stadium sold 1.532 tons of popcorn. The next sunny day, a total of 1.993 tons of popcorn was sold.

Part A

How much more popcorn was sold on the sunny day?

Answer: _____ ton(s)

Part B

An average of 1.879 tons of popcorn were sold at each game at the stadium. How many tons of popcorn have been sold at 12 games?

Answer: _____ tons

Part C

On the lines below, explain how you found your answer.

Ask Yourself
What operation do I use to find how much more?

