Contents

Acknowledgments

Continental Press

Answer Key

Unit 1 Number Sense

Lesson 1 *Powers of Ten* pp. 8–11

1. A [5.NBT.2]
2. B [5.NBT.2]
3. C [5.NBT.2]
4. D [5.NBT.2]
5. C [5.NBT.2]
6. D [5.NBT.2]
7. A [5.NBT.2]
8. C [5.NBT.2]
9. Constructed response [5.NBT.2]
   $10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10$; 10^9; 1,000,000,000
10. Constructed response [5.NBT.2]
    The decimal point moves four places to the right. The product is 38.
11. Constructed response [5.NBT.2]
    1,234,567.89
12. Constructed response [5.NBT.2]
    The decimal point moves six places to the left. The quotient is 0.09999999.
13. Constructed response [5.NBT.2]
    38×10^6 km
14. Extended response [5.NBT.2]
    Part A: $1,000
    Part B: $10,000,000. *Explanations may vary but should say something like the following:* The number 10^4 is equal to 10,000, so the most recent book earned 10,000 times as much as the first one. I multiplied to find the total: $10,000 \times 1,000 = 10,000,000$.

Lesson 2 *Whole-Number Place Value* pp. 12–15

1. A [5.NBT.1]
2. B [5.NBT.1]
3. D [5.NBT.1]
4. D [5.NBT.1]
5. C [5.NBT.1]
6. B [5.NBT.1]
7. Constructed response [5.NBT.1]
   Answers will vary; example: 4,075,203,044
8. Constructed response [5.NBT.1]
   $(3 \times 100,000,000) + (8 \times 1,000,000) + (4 \times 100,000) + (4 \times 100) + (8 \times 1)$

9. Constructed response [5.NBT.1]
   Explanations may vary but should say something like the following: The 8 in $18,000,000 is 10×10 or 100 times greater than the value of the 8 in $180,000.
10. Constructed response [5.NBT.1]
    The 6 is in the thousands place, not the ten thousands place. She forgot to include the 9 in the ones place.
11. Extended response [5.NBT.1]
    Part A: *Answer 1:* $(2 \times 100,000,000) + (9 \times 10,000,000) + (9 \times 1,000,000) + (7 \times 100,000) + (9 \times 10,000) + (2 \times 1,000) + (4 \times 100) + (5 \times 10) + (8 \times 1)$
    Answer 2: $(2 \times 10^8) + (9 \times 10^7) + (9 \times 10^6) + (7 \times 10^5) + (9 \times 10^4) + (2 \times 10^3) + (4 \times 10^2) + (5 \times 10^1) + (8 \times 10^0)$
    Part B: *Explanations may vary but should say something like the following:* The first 2 is in the hundred millions place. The second 2 is in the thousands place. The first 2 is 100,000 times greater than the second 2.

Lesson 3 *Decimal Place Value* pp. 16–19

1. C [5.NBT.1]
2. A [5.NBT.1, 3.a]
3. D [5.NBT.1, 3.a]
4. B [5.NBT.1, 3.a]
5. B [5.NBT.1, 3.a]
6. C [5.NBT.1, 3.a]
7. Constructed response [5.NBT.1, 3.a]
   $(7 \times 1) + (4 \times \frac{1}{10}) + (5 \times \frac{1}{100}) + (2 \times \frac{1}{1,000})$
8. Constructed response [5.NBT.1, 3.a]
   2,500.037
9. Constructed response [5.NBT.1, 3.a]
   7 hundredths
10. Constructed response [5.NBT.1, 3.a]
    Accept any number with five digits and the indicated digits in the specified places; example: 50.049
11. Constructed response [5.NBT.1, 3.a]
    The 9 in the hundredths place has $\frac{1}{10}$ the value of the 9 in the tenths place.

Common Core State Standards
for Mathematics, Grade 5

Operations and Algebraic Thinking   5.OA

Write and interpret numerical expressions.

1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18,932 + 921) is three times as large as 18,932 + 921, without having to calculate the indicated sum or product.*

Analyze patterns and relationships.

3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.*

Number and Operations in Base Ten   5.NBT

Understand the place value system.

1. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.

2. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

3. Read, write, and compare decimals to thousandths.

    a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times \left(\frac{1}{10}\right) + 9 \times \left(\frac{1}{100}\right) + 2 \times \left(\frac{1}{1000}\right).$

    b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

4. Use place value understanding to round decimals to any place.

Perform operations with multi-digit whole numbers and with decimals to hundredths.

5. Fluently multiply multi-digit whole numbers using the standard algorithm.

Skills Analysis for Practice Test

MC = Multiple Choice = 1 pt
CR = Constructed Response = up to 2 pt
ER = Extended Response = up to 3 pt

Student Name	Operations and Algebraic Thinking MC: #19, 27, 29 CR: #35, 42 *7 points possible*	Number and Operations in Base Ten MC: #1, 3, 8, 10, 11, 15, 16, 20, 26 CR: #32, 33, 34, 36, 39, 44, 45, 49 *25 points possible*	Number and Operations—Fractions MC: #2, 7, 17, 21, 25, 28, 30 CR: #31, 37, 40, 46, 47 ER: #51 *20 points possible*	Measurement and Data MC: #4, 6, 9, 13, 14, 22, 23 CR: #43, 48, 50 ER: #52, 53 *19 points possible*	Geometry MC: #5, 12, 18, 24 CR: #38, 41 *8 points possible*	TOTAL SCORE *79 points possible*