Errata for Math Mammoth Grade 6 Curriculum

Grade 6-A Student book

Affects: all versions prior to September 2017.

Lesson Order of Operations

Examples 3a and 3b (in the blue teaching boxes on the first page of the lesson)

These two examples had typos and didn't match each other like they were supposed to. Also, the 3b example was not actually solved correctly mathematically. I simplified the examples to be like this:

Example 3a. Here is an expression that has only *multiplications* and *divisions*: $20 \cdot 2 \div 4 \cdot 10$. Those operations are on the SAME level in the order of operations, but that does *not* mean that multiplications are solved before divisions. Instead, they are solved in order from left to right. $20 \cdot 2 \div 4 \cdot 10$ $= \quad 40 \div 4 \cdot 10$ $= \quad 10 \cdot 10 = 100$	**Example 3b.** Let's rewrite the expression from 3a. using the fraction line for division—it will become easier! Notice, there is a division by 4: $20 \cdot 2 \div 4 \cdot 10$ This means that 4 needs to be in the denominator. The expression can be written as $20 \cdot \frac{2}{4} \cdot 10$ or as $\frac{20 \cdot 2}{4} \cdot 10$ (either is correct). Comparing to the original expression $20 \cdot 4 \div 4 \cdot 10$, it looks quite different, but it is now easier to see what needs done. Verify that you get the same answer as in example 3a.

The rest of the errors listed in this document affect versions prior to February 2015.

Grade 6-A Answer Key

Review of the Four Operations 1

Answer key, p. 6

Error:

3. c. 109,841 R4

Corrected version:

3. c. 109,841 R2

Answer key, p. 7

Error:

7.c. The long division shows the quotient (above the line) as 21,852. The long division process itself is correct.

The check by multiplication uses 21,852. The multiplication process itself is correct.

Corrected version:

The quotient above the line is 21,862 and the multiplication uses 21,862.

The Order of Operations

Answer key, p. 15

Error:
6. e. … = 2/27

Corrected version:
… = 5/27

Multiplying and Dividing in Parts

Answer key, p. 17

Previous version:
9. f. 16 gal 1 1/3 qt

New version:
f. 16 gal 1 1/3 qt or 16 1/3 gal

Writing and Simplifying Expressions 2: Area

Answer key, p. 20

Error:

4. a. P = 17x

Corrected version:

4. a. P = 18x

Place Value with Decimals

Answer key, p. 32

Error:

2. b. 0.34

Corrected version:

2. b. 3.4

Convert Customary Measuring Units

Answer key, p. 41

Error:

11. 40 × 12 ÷ 21 = 22 rows.
You can put 22 rows of chairs.
(40 −6) × 12 ÷ 21 = 19 rows. You could put 19 rows of chairs.

Corrected version:

11. The room is 40 ft × 12 in./ft = 480 inches wide. Since each chair is 21 inches, and 480 ÷ 21≈ 22.857, you can place 22 chairs in one row.

The two 3-ft aisles take up 6 ft × 12 in./ft = 72 inches, so there are 480 in. − 72 in. = 408 inches left for the chairs. This time, since 408 ÷ 21 ≈ 19.429, you can fit 19 chairs in one row.

Unit Rates

Answer key, p. 48

Error:

3. f. $22.66 / mattress

Corrected version:

f. $22.67 / mattress

Error:
5. b. 7 lawns per 4 hours = 7/4 lawns per 1 hour = 1.75 lawns per hour

Corrected version:

b. 7 hours per 4 lawns = 7/4 hours per lawn = 1.75 hours or 1 h 45 min per lawn

Using Equivalent Rates

Answer key, p. 49

Error:

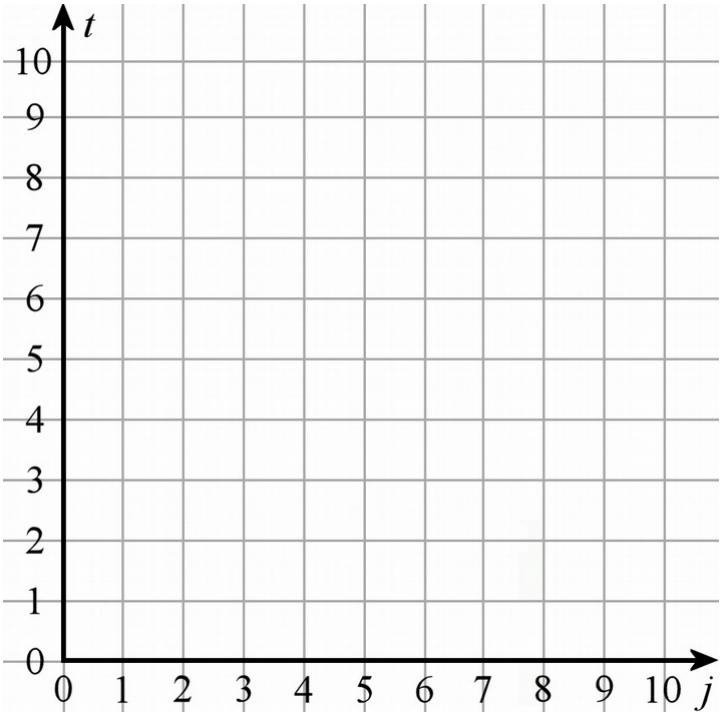
8. b. C = 0.015*p* or C = (3/20)*p*

Corrected version:

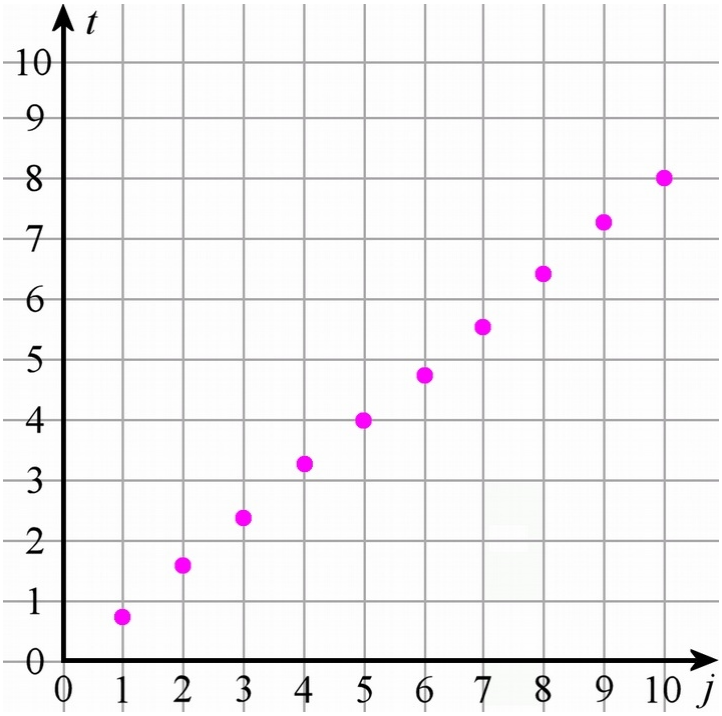
8. b. C = 0.15*p* or C = (3/20)*p*

Answer key, p. 50

9. The image in the student text was changed so that the t and j axes were switched.



9. The image in the answer key was changed similarly and also corrected to this:



Ratio Problems and Bar Models 1

Answer key, p. 52

Previous version:

9 c. Rita gave Joe 1 of her 5 parts, so she now has 1 part less, and Joe has 1 part more. So the ratio of Joe's money to Rita's money is now 4:4.

New version:

c. Rita gave Joe 1 of her 5 parts, so she now has 1 part less, and Joe has 1 part more. So the ratio of Joe's money to Rita's money is now 4:4 = 1:1.

Using Ratios to Convert Measuring Units

Answer key, p. 55

Error:

4.c. uses 0.9114, and it should be 0.9144

Corrected version:

= (700 yd · 0.9144 m / 1 yd) = 700 · 0.9144 m = 640.08 m ≈ 640 m

---

Mixed Review

Answer key, p. 56

6. Error: 4*y*

Corrected: 2*y*

Percentage of a Number (Mental Math)

Answer key, p. 61

Error:

11. The second line of the solution has $54 instead of $65.

Corrected version:

11. 10% of $65 is $6.50 . 1% of $65 is $0.65 . 2% of $65 is $1.30 .
    Now, add to get 12% of $65: $6.50 + $1.30 = $7.80

Review: Percent

Answer key, p. 65

Error:

8. 2,000/540 = 0.27 Andrew pays 27% of his salary in taxes.

Corrected version:

8. 540/2,000 = 54/200 = 27/100 = 0.27. Andrew pays 27% of his salary in taxes.

Grade 6-B

The Sieve of Eratosthenes and Prime Factorization

Answer key, p. 4

Blue box at the top should NOT include 57 in the list of primes. Also, 57 should be crossed out in the accompanying grid image. 57 is not a prime as it's divisible by 3.

The Least Common Multiple (LCM)

Answer key, p. 8

Puzzle Corner

Added a complete solution for the answer key:

Day number 236 would be Saturday.

We need to divide 236 by seven, first of all, to find out how many complete weeks have passed. We also need take a careful look at the remainder to find how many additional days have passed.

236 ÷ 7 = 33 R5 So, 33 complete weeks and 5 additional days have passed.

The 33 completed weeks would take us to a certain Monday. 33 x 7 = 231 days. So, day 231 is a Monday. Then:

day 232 – Tuesday
day 233 – Wednesday
day 234 – Thursday
day 235 – Friday
day 236 – Saturday

Review: Add and Subtract Fractions and Mixed Numbers

Answer key, p. 11

Error:

2. f. 20

Corrected version:

f. 100

6. Earlier version:

First, Emma subtracted the whole numbers (9 – 3). Then, she subtracted the part of the fraction that she could (2/17 from 8/17). Finally, she borrowed a one and converted it to a fraction so she could subtract the rest of the fraction (6/17).

Corrected version:

Emma subtracted the whole numbers (9 – 3) and the fractions (2/17 – 8/17) separately.

Since the subtraction 2/17 – 8/17 actually "goes in the hole" by 6/17 or in other words yields a negative answer, she realized she needed to subtract 6/17 more from the whole numbers. So lastly she subtracted 6/17 from 6 to get the final answer.

6. Earlier version:

First, Joe subtracted the whole numbers and the part of the fraction that he could (5 take away 2 3/14). Then he subtracted the remaining fraction (6/14) from the whole number (3).

Corrected version:

First, Joe subtracted what he could easily subtract without regrouping. So he subtracted 2 and 3/14. After that he had 3 left. Then he subtracted the rest (6/14).

Divide Fractions

Student worktext, p. 55

Erroneous version:

14. Sam planted tomatoes in his garden, which is a rectangular area of 2 1/2 square meters. If the length of the area is 5 meters, how wide is the area?

Corrected version:

14. Sam planted tomatoes in his garden, which is a rectangle with an area of 2 1/2 m^2. If one side of the garden measures 5 m, how long is the other side?

Answer key, p. 21

Erroneous version:

14. The width of the garden area was 1/2 meter.

You can divide: 5 ÷ (2 1/2) = 5 ÷ (5/2) = 5 × (2/5) = 2, or you can think of multiplication: 2 1/2 m × _____ = 5 m^2.

Corrected version:

14. The other sides measures 1/2 meter.

You can divide the area by the length of the one side to find the length of the other side: 2 1/2 m^2 ÷ 5 m = (5/2) ÷ 5 = (5/2) × (1/5) = 1/2 m, or you can think of multiplication: 2 1/2 m × _____ = 5 m^2.

Problem Solving with Fractions 1

Student worktext, p. 58

Earlier version:

6. Dad paid 1/5 of his paycheck as taxes, and of what remained, he paid 1/6 as a loan payment.
Then he had $860 left. How much was his paycheck?

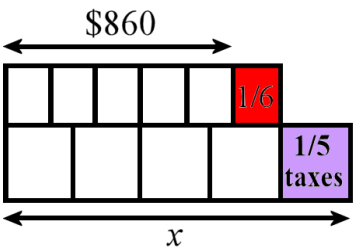
New version:

6. Dad paid 1/5 of his paycheck in taxes. After that,
he used 1/6 of what remained as a loan payment.
Then he had $860 left. How much was his paycheck?

Answer key, p. 22

New version:

The barmodel image was changed and it is now:



Answer:

Dad's paycheck was $1,290. See the bar model on the right.
First, find how much is one block in the top bar, and multiply that by 6 to
get the total amount that was left after taxes (the entire top bar). We get
$860 ÷ 5 × 6 = $1,032. This amount ($1,032) is the entire top bar and at the same time is 4/5 of the paycheck.
Now divide that by 4 (to get one block in the lower bar) and then multiply the result by 5 to get the original paycheck: $1,032 ÷ 4 × 5 = $1,290.

Fractions Review

Answer key, p. 26

Error:

14. There are 96 students in the class. One-sixth of the students is 6 students, so the total number of students is six times that number.

Corrected version:

14. There are 36 students in the class. One-sixth of the students is 6 students, so the total number of students is six times that number.

Nets and Surface Area 1

Answer key, p. 49

Error:

9. a. solid: square pyramid
surface area:
15 cm × 15 cm + 4 × (15 cm × 13 cm ÷ 2)
= 255 cm^2 + 390 cm^2 = 645 cm^2.

Corrected version:

9. a. solid: square pyramid
surface area:
15 cm × 15 cm + 4 × (15 cm × 13 cm ÷ 2)
= 225 cm^2 + 390 cm^2 = 615 cm^2.

Area of Triangles

Answer key, p. 45

Corrected version:

7. b. 2 1/8 sq. in. Again, answers may vary slightly due to variations in measuring. The base and altitude may be chosen in three different ways. The figure shows one possibility where the base is 4 in. and the altitude is 1 1/16 in. The area is then 4 in × (1 1/16 in.) ÷ 2 = 2 2/6 sq. in. = 2 1/8 sq. in.

Mixed Review

Answer key, p. 54

6. b.

Error: ... = 396.24 in.

Corrected version: .... = 396.24 cm

Measures of Variation

Answer key, p. 60

Error:
Answers to 2.b were MISSING.
Answer to 2.a. had something strange.

Corrected versions:

2. a. Range: 18 days. 1st quartile: 11 days. Median: 13 days. 3rd quartile: 15 days.
Interquartile range: 4 days.

b. Range: 11 cm. 1st quartile: 139.5 cm. Median: 140 cm. 3rd quartile: 143 cm.
Interquartile range: 3.5 cm.

Chapter on Statistics

The definition of skewed distribution was reversed (left versus right). The text presented a left-skewed distribution as an asymmetric distribution where the "bulk" of the data is on the left; in reality, a left-skewed distribution has a tail that is on the left, and the bulk of the data is on the right. The answer key reflected the same error in several places.

This error was present every time the text or answer key mentioned left or right-skewed distributions.

The error was corrected for versions sold on or after October 31, 2014.

Cumulative review Chapters 1-6

Answer key

Error:

9. a. 10,000 × 0.092 = 92

Corrected version:

a. 10,000 × 0.092 = 920
