

Understanding Place Value

Grade 5 Math • Section 1.1

Name: _____

Date: _____

Score: _____ / 14

Quick Review and Helpful Hints

👉 **Place-value pattern:** In a multi-digit number, a digit in one place represents $10\times$ what it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.

👉 **Place-value chart (decimal places):** ones \rightarrow tenths \rightarrow hundredths \rightarrow thousandths.

💡 The value of a digit depends on its **position**, not just the digit itself.

🔍 **Example:** In the number 55,500, what is the relationship between the values of the digit 5 in the thousands place and the 5 in the hundreds place?

👉 The 5 in the thousands place has a value of 5,000. The 5 in the hundreds place has a value of 500. Since $5,000 \div 500 = 10$, the 5 in the thousands place is worth 10 times as much as the 5 in the hundreds place. Equivalently, the 5 in the hundreds place is $\frac{1}{10}$ of the 5 in the thousands place.

💡 **Answer:** 10 times as much

Practice Problems

Determine the value of the underlined digit or compare digit values.

- In 3,482, the value of the digit 4 is _____.
- In 7.639, the value of the digit 3 is _____.
- In 22,200, how many times greater is the 2 in the thousands place than the 2 in the hundreds place? _____
- In 0.555, the 5 in the tenths place is how many times the value of the 5 in the hundredths place? _____
- In 44.4, the 4 in the tens place is _____ times the value of the 4 in the tenths place. _____
- In 8,880, the 8 in the hundreds place is $\frac{1}{7}$ of the 8 in the thousands place. _____
- Write the value of the 6 in 36,195: _____.
- Write the value of the 9 in 4.092: _____.
- In 1.117, the 1 in the tenths place is _____ times the 1 in the hundredths place. _____
- In 63,600, the 6 in the ten-thousands place is how many times the 6 in the hundreds place? _____
- 0.07 is $\frac{1}{10}$ of _____.
- 500 is 10 times _____.

Word Problems

- Maria says the 3 in 3,300 has the same value in both places. Is she correct? Explain your reasoning using the place-value rule. _____
- A school collected \$4,440 for a fundraiser. Explain how the value of each digit 4 in this number relates to the others using the $\times 10$ rule. _____



Answer Keys

- | | |
|-------------------|--------------------|
| 1. 400 | 8. 0.09 |
| 2. 0.03 | 9. 10 |
| 3. 10 times | 10. 100 |
| 4. 10 times | 11. 0.7 |
| 5. 100 | 12. 50 |
| 6. $\frac{1}{10}$ | 13. No |
| 7. 6,000 | 14. 4,000, 400, 40 |

Step-by-Step Explanations

- Start with the main idea. For place value, the 4 is in the hundreds place, so its value is 400. Place value is about position: the same digit can have a very different value in a new place.
- Keep the work tidy. For place value, the 3 is in the hundredths place, so its value is 0.03. Saying the place name out loud is a simple way to catch a misplaced zero.
- Look at what the numbers mean. For place value, the thousands-place 2 is 2,000 and the hundreds-place 2 is 200; $2,000 \div 200 = 10$. When two matching digits are side by side in different places, compare their values, not just the digits.
- Use the setup first. For place value, a tenth is 10 times a hundredth. Place value is about position: the same digit can have a very different value in a new place.
- Check the size of the answer. For place value, the tens-place 4 is worth 40 and the tenths-place 4 is worth 0.4; $40 \div 0.4 = 100$. Saying the place name out loud is a simple way to catch a misplaced zero.
- Match the operation to the words. For place value, the hundreds-place 8 is one tenth of the thousands-place 8. When two matching digits are side by side in different places, compare their values, not just the digits.
- Write the important values first. For place value, the 6 is in the thousands place. Place value is about position: the same digit can have a very different

value in a new place.

- Follow the pattern carefully. For place value, the 9 is in the hundredths place. Saying the place name out loud is a simple way to catch a misplaced zero.
- Start with the main idea. For place value, a tenth is 10 times as large as a hundredth. When two matching digits are side by side in different places, compare their values, not just the digits.
- Keep the work tidy. For place value, $60,000 \div 600 = 100$, so the ten-thousands 6 is 100 times as much. Place value is about position: the same digit can have a very different value in a new place.
- Look at what the numbers mean. For place value, if 0.07 is one tenth of a number, multiply by 10: $0.07 \times 10 = 0.7$. Saying the place name out loud is a simple way to catch a misplaced zero.
- Use the setup first. For place value, if 500 is 10 times a number, divide by 10: $500 \div 10 = 50$. When two matching digits are side by side in different places, compare their values, not just the digits.
- Check the size of the answer. For place value, the two 3s have values 3,000 and 300, so they are not the same. Place value is about position: the same digit can have a very different value in a new place.
- Match the operation to the words. For place value, each 4 is 10 times the value of the 4 to its right. Saying the place name out loud is a simple way to catch a misplaced zero.



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