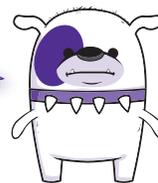


Understand Place Value

Name: _____

Prerequisite: How do you know the place value of each digit in a number?



Study the example that shows how a place-value chart shows the value of each digit in a number. Then solve problems 1–8.

Example

The place-value chart shows the number 435.

Hundreds	Tens	Ones
4	3	5

Word form: *four hundred thirty-five*

The 4 in the hundreds place has a value of 400.

The 3 in the tens place has a value of 30.

The 5 in the ones place has a value of 5.

So, another way to write 435 is $400 + 30 + 5$.

- 1** Show the number 762 in the following place-value chart.

Hundreds	Tens	Ones

- 2** What is the value of 7 in 762? _____
- 3** What is the value of the digit in the tens place in 762? _____
- 4** Use place value to show another way to write 762.

$$762 = \underline{\quad} + \underline{\quad} + \underline{\quad}$$

Vocabulary

word form how a number is written with words or said aloud.

value the amount a digit is worth.



Solve.

- 5 Use the place-value chart below to help you think about the value of each digit in the number.

Hundreds	Tens	Ones
5	2	2

- a. Write the number. _____
- b. Write the number in word form.
Five _____ twenty-_____
- c. Write the number another way.
_____ = _____ + _____ + _____

- 6 Look at the place-value chart in problem 5.

- a. The digit in the ones place is _____.
The value of the digit in the ones place is _____.
- b. The digit in the tens place is _____.
The value of the digit in the tens place is _____.
- c. $20 = \underline{\quad} \times 2$

- 7 a. What is the value of 3 in 123? _____
- b. What is the value of 3 in 231? _____
- c. What is the value of 3 in 312? _____
- d. $30 = \underline{\quad} \times 3$ $300 = 10 \times \underline{\quad}$

- 8 Use the digits 4, 5, and 6 to write a number in which 4 has a value of 400. Explain your thinking.

Use Place Value

Study how the example uses a place-value chart to show the value of the digits in a number. Then solve problems 1–8.

Example

Look at the place-value chart below. What is the value of the 3?

Then, use place value to explain the value of 3 if it were in the ten thousands place.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
2	0	3	5	5	4

Standard form: 203,554

Expanded form: $200,000 + 3,000 + 500 + 50 + 4$

Word form: *two hundred three thousand, five hundred fifty-four*

The 3 is in the thousands place, so it has a value of 3,000.

If 3 were in the ten thousands place, its value would be 30,000.

- 1 Write 70,681 in the following place-value chart.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

- 2 Write 70,681 in expanded form and word form.

- 3 What would be the value of 8 if it were in the thousands place? _____

- 4 What is the value of the 6 in 70,681? Explain how you know.

Vocabulary

value the amount a digit is worth.

Solve.

- 5** What number is one thousand less than 921,438?
Explain how you know.

- 6** What number is one hundred thousand more than 75,000? Explain how you know.

- 7** Show some different ways you can make 7,502.

_____ hundreds + _____ tens + _____ ones
_____ tens + _____ ones
_____ ones

- 8** What are three different ways to make the number 15,638 with only hundreds, tens, and ones?

- 9** Solve the following base ten riddle:

I have 30 ones, 82 thousands, 4 hundred thousands,
60 tens, and 100 hundreds. What number am I?

Solution: _____



Reason and Write

Study the example. Underline two parts that you think make it a particularly good answer and a helpful example.

Example

Emma looked at the numbers 4,075 and 1,806. Her thinking is shown below.

The number 1,806 has more hundreds than 4,075 because 1,806 has 8 in the hundreds place, and 4,075 has 0 in the hundreds place. 8 hundreds is more than 0 hundreds.

Tell why Emma's thinking is incorrect. Then explain why there are more hundreds in 4,075 than in 1,806.

Show your work. Use a place-value chart, words, and numbers to explain your answer.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
		4	0	7	5
		1	8	0	6

Emma looked only at the digits 0 and 8 in the hundreds place. She needed to also look at the digits in the thousands place.

4,075 has 4 thousands, or 40 hundreds, not 0 hundreds.

1,806 has 1 thousand, or 10 hundreds, plus 8 hundreds for a total of 18 hundreds, not 8 hundreds.

40 hundreds is more than 18 hundreds. There are more hundreds in 4,075 than in 1,806.

Where does the example ...

- use a chart to show the place value of digits?
- use words and numbers to explain?
- give details?



Solve the problem. Use what you learned from the model.

Tyler looked at the numbers 10,020 and 20,010. His thinking is shown below.

The number 10,020 has more tens than 20,010 because 10,020 has 2 in the tens place, and 20,010 has 1 in the tens place. 2 tens is more than 1 ten.

Tell why Tyler's thinking is incorrect. Then explain why there are more tens in 20,010 than in 10,020.

Show your work. Use a place-value chart, words, and numbers to explain your answer.

Did you ...

- use a chart to show the place value of digits?
- use words and numbers to explain?
- give details?

