Unit 1 · Place Value and Number Sense Cheat Sheet

Unit 1 focus: place value to one million and reading and writing numbers

1 Big Idea

Each place is worth 10 times the place to its right. The same digit can have different values in different places.

2 Important Vocabulary

place value	The value a digit has because of where it is in a number.	In 3,470 the 4 is worth 400
period	A group of three digits in a number, separated by a comma.	In 52,318 the thousands period is 52
standard form	A number written with digits.	40,612
expanded form	A number written as the sum of the values of its digits.	40,612 = 40,000 + 600 + 10 + 2

3 How It Works

Write 52,706 in expanded form.

Example: Find the value of each digit.
5 ten thousands: 50,000
2 thousands: 2,000
7 hundreds and 6 ones: 700 and 6

Answer: 50,000 + 2,000 + 700 + 6

4 Visual Model

hundred thousands	ten thousands	thousands	hundreds	tens	ones
4	5	2	0	6	8

452,068: the 5 is in the ten thousands place, so it is worth 50,000.

5 ★ Remember This · Watch Out!

★ Remember this

- Read the thousands period, say “thousand,” then read the rest.
- Use zeros to hold empty places: thirty thousand, twelve is 30,012.

⚠ Watch out!

- **Digit or value?:** the digit is 7, the value might be 700 or 7,000
- **Do not skip a place:** 5,032 is not 532

6 Try It!

1. Write 300,000 + 4,000 + 90 + 1 in standard form.
   Answer: 304,091
2. What is the value of the 8 in 68,250?
   Answer: 8,000

Answers are printed upside down. Turn the page to check!

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More practice: comparing, ordering and rounding whole numbers

1 Big Idea

Compare from the left, one place at a time. Round by looking at the digit to the right of the rounding place.

2 Important Vocabulary

compare	Decide whether a number is greater than, less than, or equal to another number.	7,310 > 7,301
round	Change a number to a nearby number that is easier to use.	4,862 rounds to 5,000
estimate	A number that is close to the exact amount.	About 5,000 people came
word form	A number written in words.	forty thousand, six hundred twelve

3 How It Works

Round 46,381 to the nearest thousand.

Example: 46,381 is between 46,000 and 47,000.
Look right: the hundreds digit is 3
3 is less than 5: round down

Answer: 46,000

4 Visual Model

Round 4,700 to the nearest thousand:

4,000 ← 4,500 is halfway → 5,000

4,700 is past halfway, so it rounds up to 5,000.

Compare 45,871 and 45,781: the hundreds differ, and 8 > 7, so 45,871 > 45,781.

5 ★ Remember This · Watch Out!

★ Remember this

- 5 or more: round up. Less than 5: round down.
- More digits means a greater whole number.

⚠ Watch out!

- **Rounding is not chopping:** 4,862 rounds to 5,000, not 4,000
- **Line up the places first:** compare 8,975 and 12,004 by place, not by first digit

6 Try It!

1. Order from least to greatest: 7,310; 7,301; 7,130

   Answer: 7,130; 7,301; 7,310

2. Round 285,470 to the nearest ten thousand.

   Answer: 290,000

Answers are printed upside down. Turn the page to check!