

Grade 4 · Rounding Multi-Digit Numbers · Lesson

Common Core 4.NBT.A.3 · mathovore.fr

Rounding replaces a number with the nearest multiple of a chosen place, such as ten, hundred, or thousand. To round, look at the digit to the right of that place. If it is 5 or more, round up. If it is 4 or less, round down. Grade 4 students round whole numbers up to 1,000,000.

Grade 4 Common Core: 4.NBT.A.3

Key facts:

- To round to a place, look at the digit one place to the right.
- A digit of 5 or more rounds up. A digit of 4 or less rounds down.
- A number exactly halfway between two multiples rounds up, so 350 rounds to 400.
- All the digits to the right of the rounding place become zeros.
- Rounding 99,950 to the nearest hundred gives 100,000 because the 9 carries.

What does it mean to round a number?

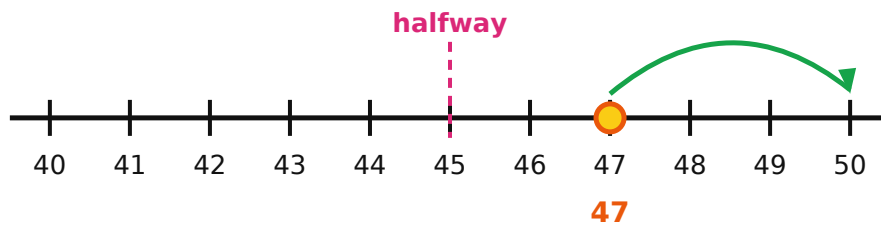
Rounding replaces a number with a nearby number that is easier to use. The new number ends in zeros. A sports report might say that 47 fans came, or it might say "about 50." Both tell the story, but 50 is easier to say and remember.

Rounding

To round to a place, find the two multiples of that place that the number sits between. Then pick the one that is closer. If the number is exactly halfway, round up.

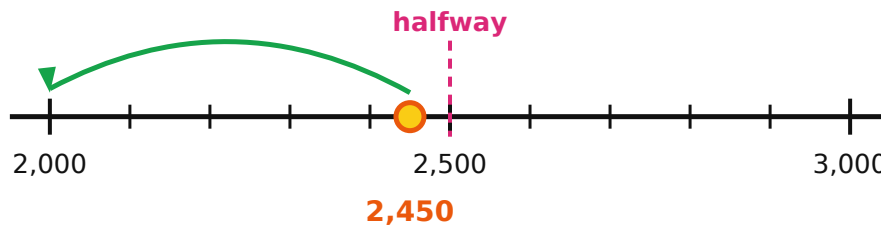
How can a number line help you round?

Look at 47. It sits between 40 and 50, and the halfway mark is 45. Because 47 is past 45, it is closer to 50.



47 is past the halfway mark 45, so it is closer to 50. 47 rounds to 50.

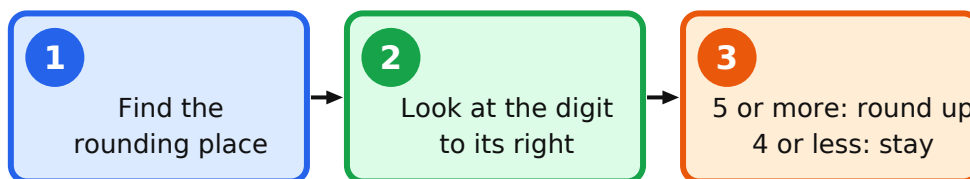
Now look at 2,450 and round to the nearest thousand. It sits between 2,000 and 3,000, and the halfway mark is 2,500. The number 2,450 comes before 2,500, so it is closer to 2,000.



2,450 is before the halfway mark 2,500, so it rounds down to 2,000.

What is the rule for rounding any number?

1. Underline the digit in the place you are rounding to.
2. Look at the digit just to its right.
3. If that digit is 5, 6, 7, 8, or 9, add 1 to the underlined digit. If it is 0, 1, 2, 3, or 4, leave the underlined digit alone.
4. Change every digit to the right of the rounding place to 0.



The three steps for rounding any whole number.

Example. Round 38,462 to the nearest hundred. The hundreds digit is 4. The digit to its right is 6, which is 5 or more, so the 4 becomes 5. Then the tens and ones become zeros: 38,500.

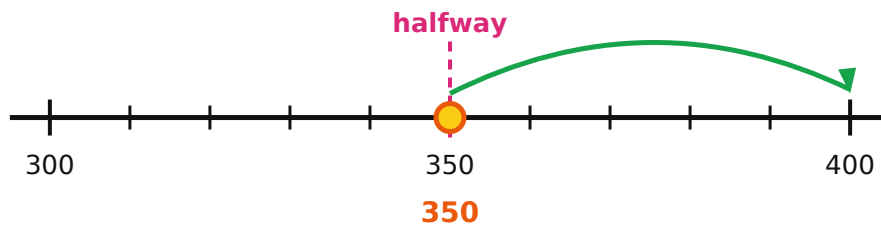
Round to the nearest	Digit to the right	Rounded number
ten	2	38,460
hundred	6	38,500
thousand	4	38,000
ten thousand	8	40,000

The number 38,462 rounded to four different places.

What happens when the digit is a 9 or the number is halfway?

When the rounding digit is 9 and you must round up, the 9 becomes 10, so you carry to the next place. For example, 8,962 rounded to the nearest hundred is 9,000, and 99,950 rounded to the nearest hundred is 100,000.

A number that ends exactly halfway, such as 350 when rounding to the nearest hundred, rounds up. The number line shows why: 350 is the same distance from 300 and 400, so mathematicians agree to round up.



350 is exactly halfway between 300 and 400. By the rule, it rounds up to 400.

Rounding Multi-Digit Numbers: frequently asked questions

What is the rule for rounding numbers?

Find the rounding place and look at the digit to its right. If it is 5 or more, increase the rounding digit by 1. If it is 4 or less, keep it. Then write zeros in all the places to the right.

Why does 5 round up?

A digit of 5 puts the number exactly halfway between two multiples, such as 350 between 300 and 400. Mathematicians agree to round halfway numbers up so that everyone gets the same answer.

How do you round 99,960 to the nearest hundred?

The hundreds digit is 9 and the digit to its right is 6, so round up. The 9 plus 1 makes 10, which carries over all the way. The answer is 100,000.

When do people round numbers in real life?

People round when an exact number is not needed, such as saying a stadium holds about 39,000 fans, or a road trip is about 2,500 miles. Rounding also helps with quick estimates.

Can a number round to itself?

Yes. If the digits to the right of the rounding place are all zeros, the number is already rounded. For example, 4,300 rounded to the nearest hundred is 4,300.