

Numbers to 10 and Counting: math lesson, Grade 1 – download the PDF

Numbers are all around you. You count your steps, your crayons, and the kids in your class. In this chapter you will count to 10, read and write the numbers, and tell which group or which number is bigger or smaller. Let's get started!

1. Counting forward and backward

When you count **forward**, each number is **one more** than the number before it: 1, 2, 3, 4, 5. When you count **backward**, each number is **one less**: 5, 4, 3, 2, 1. A number line helps you see this. Moving to the right means counting forward. Moving to the left means counting backward.



On this number line, start at point A, which is at 3. Hop right one step and you land on 4. Keep hopping and you reach point B at 8. Now hop left from 8 and you land on 7, then 6, and so on.

D Counting forward and backward

Counting forward goes up by 1 each time. Counting backward goes down by 1 each time. We can count within 10, which means we stay between 0 and 10.

E Example 1: finish the counting

Fill in the missing numbers: 4, 5, __, 7, __, 9.

Counting forward, one more than 5 is 6, and one more than 7 is 8. The sequence is 4, 5, 6, 7, 8, 9.

2. Numerals and number words from 0 to 10

A **numeral** is the symbol we write for a number, like 7. A **number word** is how we write the number with letters, like seven. Look at the table to match them.

Numeral	0	1	2	3	4	5
Word	zero	one	two	three	four	five

Numeral	6	7	8	9	10
Word	six	seven	eight	nine	ten

The number **zero** means none. If a plate has no cookies on it, there are 0 cookies. Zero is the smallest number we use for counting. Be careful with **10**. It is written with two digits, a 1 and a 0, but it is just one number: ten.

! Zyro says

On my planet we also count moons. A planet with no moons has 0 moons, and that still counts as a number!

3. Counting objects to tell how many

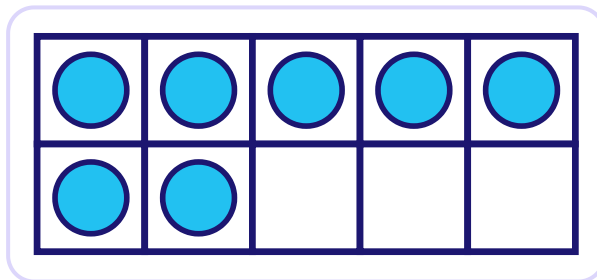
To find out **how many** objects there are, touch each object once and say one number for each. The last number you say tells how many in all. Try not to skip an object and never count the same one twice.

M

How to count objects

1. Start with the number 1 on the first object.
2. Touch or move each object once as you say the next number.
3. Stop when no objects are left.
4. The last number you said is the total.

A **ten frame** makes counting faster. It has two rows of five boxes. Fill one box for each object.



E

Example 2: use the ten frame

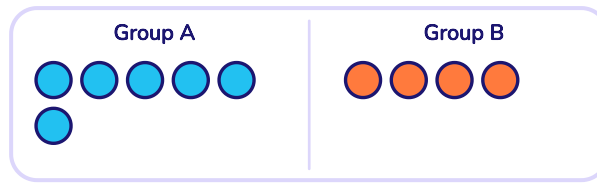
The ten frame shows 5 counters in the top row and 2 counters in the bottom row.

Count: 1, 2, 3, 4, 5, 6, 7. There are **7** counters. Three boxes are empty, so we know 7 is 3 away from 10.

4. Comparing groups: more, fewer, and equal

To compare two groups, you can match the objects one to one. Pair one object from the first group with one object from the second group. If one group has objects left over with no partner, that

group has **more**. The other group has **fewer**. If every object has a partner, the groups are **equal**.



In the picture, Group A has 6 circles and Group B has 4 circles. After pairing four circles from each group, two cyan circles have no partner. So Group A has **more** and Group B has **fewer**.

E

Example 3: more, fewer, or equal?

Nora has 5 shells. Ty has 5 shells. Pair them up: every shell has a partner and none is left over. The groups are **equal**. Nora does not have more, and Ty does not have fewer.



Careful!

A group that is spread out wide is not always the bigger group. Always count, or match one to one, instead of guessing by how it looks.

5. Comparing numbers: greater than, less than, equal to

We can compare numbers the same way we compare groups. The number that is said later when you count forward is the **greater** number. The number that is said earlier is the **less** number. We use three signs.

D**Comparison signs**

- $7 > 4$ means 7 is **greater than** 4.
- $3 < 8$ means 3 is **less than** 8.
- $5 = 5$ means 5 is **equal to** 5.

The sign is like a hungry mouth. It opens toward the greater number. When the numbers are the same, we use the equal sign.

P**Remember**

A number is always greater than the numbers that come before it when you count forward. For example, 9 is greater than 6, so $9 > 6$ and $6 < 9$ are both true. They say the same thing in two ways.

6. Ordering numbers from least to greatest

To put numbers in order, find the least number first, then the next one, and so on. **Least to greatest** goes from the smallest to the biggest. **Greatest to least** goes the other way.

M**How to order numbers**

1. Look at all the numbers and pick the least one.
2. Write it first.
3. Cross it out, then pick the least one that is left.
4. Keep going until every number is used.

E**Example 4: order the numbers**

Put 9, 2, 6, and 0 in order from least to greatest.

The least is 0. Then 2 is the least of 9, 2, and 6. Then 6. The last one is 9. The order is 0, 2, 6, 9.

7. Putting it all together

You can use all your new skills in one problem. Suppose Eli counts 8 blocks and Jada counts 6 blocks. You count each group, compare 8 and 6, and say **$8 > 6$** . Eli has more blocks and Jada has fewer blocks. If you count backward from 8, you say 8, 7, 6. That is 2 steps, so Eli has 2 more blocks than Jada.

Always check your work. Count again, look at the number line, and ask yourself whether the answer makes sense.

Key takeaways

- Counting forward means one more each time. Counting backward means one less each time.
- A numeral like 6 and a number word like six name the same number. Zero means none.
- To count objects, say one number for each object. The last number tells how many.
- Match groups one to one to tell which has more, fewer, or if they are equal.
- Use $>$, $<$, and $=$ to compare numbers. The sign opens toward the greater number.
- To order numbers, find the least first and move up to the greatest.



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