

Five Steps to Zero



Start with a given number

***Always try your number before you give it to your student(s). ***

- Grades K-2 – addition or subtraction.
- Kindergarten- up to 10, then up to 18.
- Grades 1-2 – up to 18, then teach them to divide a number by 2, where there is an equal amount in each group then use even numbers to 36.
- Grades 3 – 7 – addition, subtraction, multiplication, or division.
- Grades 3-4 – up to 18, then 50, then 100, then 500.
- Grades 5-7 – up to 18, then 50, then 100, then 500, then 1,000

1. Use exactly 5 steps to proceed from the given number to zero.
2. Each step must include one operation:
3. Each step must include a whole number from 1 to 9
4. You cannot use zero, negative numbers, or numbers greater than 9.

Introducing the game

Introduce the game as [One Step to Zero](#),
using the same rules and pick a number from 1-9.

Quickly move to [Two Steps to Zero](#),
using numbers that can easily lead to zero with
two steps of subtraction 18 or below (Try 15 or 18.)

and then, using numbers that also need division below 81. (Try 45 or 72.)

Once they understand how the game works, begin [Five Steps to Zero](#).

Commonly Asked Questions and Issues

- 1.) Can I use the same operation more than once? Yes, there are only 4 operations and 5 steps.
- 2.) Can I use the same number twice? Yes.
- 3.) Watch for students using a number more than 1-9. Often, they will divide a number by 10. This is not allowed.

Example

Number: 673

Step 1. Add 2: $673 + 2 = 675$

Step 2. Divide by 5 $675 \div 5 = 135$

Step 3. Divide by 5 $135 \div 5 = 27$

Step 4. Divide by 9 $27 \div 9 = 3$

Step 5. Subtract 3 $3 - 3 = 0$

Have them discuss how they solved the problem afterwards. Have them use good math language.