

# About KenKen

KenKen<sup>®</sup> is a fun puzzle game that helps improve math skills. Basic KenKen uses a 4x4 square box to challenge you in addition and subtraction. The goal is to fill in the boxes with numbers 1 through 4 according to the rules below. Bold outlines surrounding some of the boxes are called **cages**. Each cage has a number in the top left corner and sometimes a plus or minus sign. Cages with a + or – mean addition or subtraction.

## Basic KenKen

### Rules:

1. Each **row** and **column** must contain a number 1 through 4 **without repeating**.
2. For single-box cages, use the number in the top left corner.
3. For multi-box cages, **add** or **subtract** to equal the number in the top left corner.

### Example:

1. To start, fill in all the **single-box cages** with the number in the top-left corner.
2. In **Row-1**, we start with 2 and 1. We need 3 and 4, but we don't know the order. Since we have a 4 in the bottom square of Column-2 and we cannot repeat in a column, the cage order must be 3 then 4.
3. In **Row-2**, the 7+ cage must contain 3 and 4, because those are the only two numbers between 1 and 4 that add up to 7. Since Column-4 already has a 3, the last number in Row-2 must be 4.
4. In **Row-4**, the last number in Column-4 must be 2 since that's the only number missing. The other number in the cage must be 1 because the cage contains a 3+ and we need a number that adds to 3.
5. In **Column-1**, the 7+ cage must contain 3 and 4, but we don't know the order. Since we already have a 4 in Row-4, the bottom square in Column-1 must be 3.
6. **Finish the puzzle** by following the 1st rule: Each **row** and **column** contains a number from 1 to 4: **no repeats**.

1. Fill in single boxes.

<sup>2</sup> <b>2</b>	<sup>1-</sup>		<sup>1</sup> <b>1</b>
<sup>3+</sup>		<sup>7+</sup>	
<sup>7+</sup>	<sup>1-</sup>		<sup>3</sup> <b>3</b>
	<sup>4</sup> <b>4</b>	<sup>3+</sup>	

2. Finish Row-1.

<sup>2</sup> <b>2</b>	<sup>1-</sup> <b>3</b>	<b>4</b>	<sup>1</sup> <b>1</b>
<sup>3+</sup>		<sup>7+</sup>	
<sup>7+</sup>	<sup>1-</sup>		<sup>3</sup> <b>3</b>
	<sup>4</sup> <b>4</b>	<sup>3+</sup>	

3. Start Row-2.

<sup>2</sup> <b>2</b>	<sup>1-</sup> <b>3</b>	<b>4</b>	<sup>1</sup> <b>1</b>
<sup>3+</sup>		<sup>7+</sup> <b>3</b>	<b>4</b>
<sup>7+</sup>	<sup>1-</sup>		<sup>3</sup> <b>3</b>
	<sup>4</sup> <b>4</b>	<sup>3+</sup>	

4. Start Row-4.

<sup>2</sup> <b>2</b>	<sup>1-</sup> <b>3</b>	<b>4</b>	<sup>1</sup> <b>1</b>
<sup>3+</sup>		<sup>7+</sup> <b>3</b>	<b>4</b>
<sup>7+</sup>	<sup>1-</sup>		<sup>3</sup> <b>3</b>
	<sup>4</sup> <b>4</b>	<sup>3+</sup> <b>1</b>	<b>2</b>

5. Start Column-1.

<sup>2</sup> <b>2</b>	<sup>1-</sup> <b>3</b>	<b>4</b>	<sup>1</sup> <b>1</b>
<sup>3+</sup>		<sup>7+</sup> <b>3</b>	<b>4</b>
<sup>7+</sup> <b>4</b>	<sup>1-</sup>		<sup>3</sup> <b>3</b>
<b>3</b>	<sup>4</sup> <b>4</b>	<sup>3+</sup> <b>1</b>	<b>2</b>

6. Finish the Puzzle.

<sup>2</sup> <b>2</b>	<sup>1-</sup> <b>3</b>	<b>4</b>	<sup>1</sup> <b>1</b>
<sup>3+</sup> <b>1</b>	<b>2</b>	<sup>7+</sup> <b>3</b>	<b>4</b>
<sup>7+</sup> <b>4</b>	<sup>1-</sup> <b>1</b>	<b>2</b>	<sup>3</sup> <b>3</b>
<b>3</b>	<sup>4</sup> <b>4</b>	<sup>3+</sup> <b>1</b>	<b>2</b>

Find out more about KenKen at [actonpip.org](http://actonpip.org)



Parent Involvement Project

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