

HOW TO PLAY KENKEN®

1. Fill in each square with a single number. In a 3x3 grid, use the numbers 1 through 3. In a 4x4 grid, use the numbers 1 through 4. In a 5x5 grid, use the numbers 1 through 5...and so on.
2. Do not repeat numbers in any individual row or column. For example, in a 3x3 grid, each column and each row should be filled in with the numbers 1, 2, and 3, with no duplication.
3. Each heavily outlined set of squares is called a “cage.” The numbers in each cage must combine (in any order) to produce the target number indicated in the top corner by using the mathematical operation next to the target number.
4. A number may be repeated within a cage as long as it is not in the same row or column.

HINTS

1. First fill in single box cages, called “freebies,” with the number in the top left corner.
2. Note the candidates (all possible numbers for each square) for each remaining square and then determine the correct numbers by math, logic, and process of elimination.
3. Each puzzle has one unique solution.

Hello, I'm Lulu, the KenKen Guru.
Did you know the Japanese word,
Kengaeru, means “to think”?



+

3	3+	
5+		7+

+ -

3	3+	1-
3+		
	4+	

+ -

5+	1-	3
		1-
2-		

+ -

7+		4+
2-		
	1-	

x

2x	3x	
	2	6x
3x		

x ÷

3÷		12x
2÷		
	3÷	

+

5+	5+	
	7+	
1		

+

7+	3+	
		6+
2		

+ -

1-	2-	
	3+	
1-		3

+ -

1-	5+	3
		1-
2-		

x

3x	6x	
		2x
6x		

x ÷

3÷		6x
6x		
	2x	

+

8+	3+		3
	6+	3	3+
		9+	
5+			

+

4	6+		
7+		5+	8+
5+			
	5+		

+ -

8+		5+	
4		9+	6+
3+			
3-			

× ÷

2÷	12×	3×	
		2÷	
3×		24×	
	2÷		

+ - × ÷

2÷		48×	
2÷	2-		5+
		1-	
7+			1

+ - × ÷ **Challenging**

1-	2	2-	2÷
	12×		
2÷		2÷	
	8+		

4x4

+

3+	7+	4+	
		7+	7+
9+			
	3+		

+

8+		4+	
	3	5+	6+
4+	5+		
		5+	

+ -

3-		2-	1-
6+	4		
		2-	3-
5+			

× ÷

12×			2÷
2÷	3×		
		6×	
3	2÷		

+ - × ÷

7+		2÷	
1-	24×		
	2-		2÷
3	3-		

+ - × ÷ **Challenging**

2÷		6×	9+
1			
2-		2÷	
1-			1

5x5

+

10+			9+	5+
3+	1	15+		
	5+			7+
9+			6+	
	5+			

+ -

4	8+		6+	12+
3-	2			
	4-			
9+			4-	
2-		9+		2

+ - × ÷

3-		3+	3	9+
2÷	1-		20×	
		7+		1-
15×				
3-		10+		

+ - × ÷ **Challenging**

1-		2÷		60×
2÷	2÷	2-		
			1-	4-
11+	2÷			
		5+		2

5x5

+

5	7+		5+	4+
9+				
8+	7+		7+	
		8+		
6+			9+	

+

10+	9+			5
			6+	
9+	3+		10+	8+
	5+			
1	9+			

+ - × ÷

20×	3	8×	2÷	
	10×		4+	
3			1-	
1-	9+		10×	1-
	2-			

+ - × ÷ **Challenging**

9+		1-		6×
5+	10+			
		12×		5
4-	8+	1	2÷	
			1-	

+ - × ÷ Challenging

15×	5-	7+		1-	3-
		2÷	2-		
2-	10+			4-	
				17+	
2÷		3-	3÷		
3÷			11+		

+ - × ÷ Extra Challenging

3-		360×			3÷
180×	6+				
			10+		
2-	30×	6+		1-	
				18×	
6	14+				

+ - × ÷ Challenging

2-		3÷		2÷	2-
5-	2÷	15×	6+		
				2-	2-
24×	3-		3		
	11+	5-		2-	2÷
		2-			

+ - × ÷ Extra Challenging

6+	1-	8×			7+
		36×	1-	3	
	3÷			120×	
14+			9+		
		1-			1-
3-			3÷		

+ - × ÷ Challenging

28×	1260×				1-	
		2÷		14+		
	2÷		15+	6-		
19+				10+	7+	
		10+				3
	28×	4-	10+		2-	
			3÷		2-	

+ - × ÷ Extra Challenging

280×		3÷	1-	5-	12+	5-	
	13+						2÷
3			5-	1-	3-		
2÷	48×				5	1-	4-
		1-		48×			
4-	5-	3	11+			3-	
		56×			2÷		4-
18+			6×		7-		

+ - x ÷ Challenging

6-	3-		1-	240×		6+
	1-	1-				
60×			6-		12+	
	4-	23+		3÷		
		5+			9+	84×
3÷			24×			
2÷		5		4-		

+ - x ÷ Extra Challenging

2-		2÷	42×	3-	7-		2÷
15+					3-	3-	
15+		1-		224×			11+
8+		6	768×				
				2÷	2÷		15+
24×	20×				6		
		6-		17+		13+	2÷
15+			2				

Bonus Puzzle

There are several ways to enjoy KenKen. Try this variant!

KenKen Twist: Instead of using the numbers from 1 to the size of the grid, use the numbers indicated at the top right of the puzzle.

KenKen Twist

2 3 4 6 7 9

3÷		16+		1-	
12×		4-		25+	
2-		72×	4-		
16+	21×			18+	1-
		14+			
7-					6

Bonus Puzzle

There are several ways to enjoy KenKen. Try this 9x9!

9x9 puzzles are currently the largest sized KenKen. Challenge yourself!

+ - × ÷ Extra Challenging

35×	270×	13+		6×	8-		2÷	
					11+	2÷	36×	
336×		8-						23+
	1-		360×					
10+	13+	13+			18+		6-	
			21+				25+	
	11+		17+		2÷			5
	18×	378×			11+			2-
				12×		6+		

ANSWER KEY

3 ⁺	3 ⁺	
3	1	2
5 ⁺		7 ⁺
1	2	3
2	3	1

3 ⁻	3 ⁺	1 ⁻
3	1	2
3 ⁺		
1	2	3
2	4 ⁺	1

5 ⁺	1 ⁻	3
2	1	3
		1 ⁻
3	2	1
2 ⁻		
1	3	2

7 ⁺		4 ⁺
2	3	1
2 ⁻		
1	2	3
3	1 ⁻	2

2 ^x	3 ^x	
2	3	1
	2	6 ^x
1	2	3
3 ^x		
3	1	2

3 [÷]		12 ^x
3	1	2
2 [÷]		
1	2	3
2	3 [÷]	1

3 ⁺	7 ⁺	4 ⁺	
2	4	1	3
	7 ⁺	7 ⁺	
1	3	4	2
9 ⁺			
4	2	3	1
3	3 ⁺	2	4

8 ⁺		4 ⁺	
4	2	3	1
2	3	1	4
3	5 ⁺	6 ⁺	
4	3	1	4
1	4	5 ⁺	2
3	1	4	2

3 ⁻		2 ⁻	1 ⁻
4	1	3	2
6 ⁺	4		
2	4	1	3
		2 ⁻	3 ⁻
1	3	2	4
5 ⁺			
3	2	4	1

12 ^x		2 [÷]	
1	4	3	2
2 [÷]	3 ^x		
2	3	1	4
		6 ^x	
4	1	2	3
3	2 [÷]		
3	2	4	1

7 ⁺		2 [÷]	
4	3	2	1
1 ⁻	24 ^x		
1	2	4	3
	2 ⁻	2 [÷]	
2	1	3	4
3	4	1	2

2 [÷]		6 ^x	9 ⁺
2	4	1	3
1			
1	2	3	4
2 ⁻		2 [÷]	
3	1	4	2
4	3	2	1

5	7 ⁺	5 ⁺	4 ⁺
5	1	4	2
9 ⁺			
4	5	2	3
8 ⁺	7 ⁺	7 ⁺	
3	2	5	1
		8 ⁺	
1	4	3	5
6 ⁺		9 ⁺	
2	3	1	4

10 ⁺	9 ⁺		5
2	3	4	1
		6 ⁺	
3	5	1	4
9 ⁺	3 ⁺	10 ⁺	8 ⁺
5	1	2	3
	5 ⁺		
4	2	3	5
1	9 ⁺		
1	4	5	2

20 ^x	3	8 ^x	2 [÷]
5	3	4	1
	10 ^x	4 ⁺	
4	5	2	3
3		1 ⁻	
3	2	1	4
1 ⁻	9 ⁺	10 ^x	1 ⁻
1	4	5	2
	2 ⁻		
2	1	3	5

9 ⁺		1 ⁻	6 ^x
4	5	2	1
5 ⁺	10 ⁺		
3	4	5	2
		12 ^x	5
2	1	4	3
4 ⁻	8 ⁺	1	2 [÷]
5	3	1	4
		1 ⁻	
1	2	3	5

2 ⁻		3 [÷]	2 [÷]	2 ⁻
5	3	6	2	1
5 ⁻	2 [÷]	15 ^x	6 ⁺	
1	4	3	5	2
		2 ⁻	2 ⁻	
6	2	5	1	4
24 ^x	3 ⁻	3		
2	1	4	3	6
	11 ⁺	5 ⁻	2 ⁻	2 [÷]
4	5	1	6	3
3	6	2	4	5

6 ⁺	1 ⁻	8 ^x		7 ⁺
3	5	1	2	4
		36 ^x	1 ⁻	3
2	4	6	5	3
		3 [÷]		
1	2	3	4	6
14 ⁺		9 ⁺		
5	6	2	3	1
		1 ⁻		1 ⁻
6	3	4	1	5
3 ⁻		3 [÷]		
4	1	5	6	2

6 ⁻	3 ⁻	1 ⁻	240 ^x	6 ⁺
1	4	7	3	2
	1 ⁻			
7	6	3	2	4
60 ^x		6 ⁻	12 ⁺	
3	5	2	7	1
	4 ⁻	23 ⁺	3 [÷]	
4	7	6	5	3
	5 ⁺	9 ⁺	84 ^x	
5	3	4	1	6
3 [÷]		24 ^x		
6	2	1	4	5
2 [÷]		5	4 ⁻	
2	1	5	6	7

Bonus Puzzle:

2 ⁻		2 [÷]	42 ^x	3 ⁻	7 ⁻	2 [÷]
5	3	2	7	6	1	8
15 ⁺				3 ⁻	3 ⁻	
8	7	1	6	3	5	4
15 ⁺			224 ^x		11 ⁺	
3	6	4	5	8	2	7
8 ⁺		6	768 ^x			
1	5	6	3	7	4	2
			2 [÷]	2 [÷]	15 ⁺	
7	1	8	4	2	3	6
24 ^x	20 ^x			6		
2	4	5	8	1	6	3
		6 ⁻	17 ⁺	13 ⁺	2 [÷]	
6	2	7	1	4	8	5
15 ⁺		2				
4	8	3	2	5	7	1

35 ^x	270 ^x	13 ⁺	6 ^x	8 ⁻	1 ⁻	2 [÷]
5	6	7	2	3	9	1
				11 ⁺	2 [÷]	36 ^x
7	9	5	4	1	6	8
336 ^x		6 ⁻				23 ⁺
8	7	1	9	2	5	4
		1 ⁻		360 ^x		
6	3	2	1	5	8	9
10 ⁺	13 ⁺	13 ⁺		18 ⁺	6 ⁻	
3	4	8	5	9	2	6
		21 ⁺		25 ⁺	23 ⁺	
1	5	4	8	6	7	3
	11 ⁺	17 ⁺		2 [÷]		6
4	8	3	6	7	1	2
	18 ^x	378 ^x		11 ⁺		
2	1	9	3	8	4	7
			12 ^x	6 ⁺		
9	2	6	7	4	3	5

ANSWER KEY

⁵⁺ 2	⁵⁺ 1	3
3	⁷⁺ 2	1
¹ 1	3	2

⁷⁺ 3	³⁺ 2	1
1	3	⁶⁺ 2
² 2	1	3

¹⁻ 2	²⁻ 3	1
3	³⁺ 1	2
¹⁻ 1	2	³ 3

¹⁻ 1	⁵⁺ 2	³ 3
2	3	¹⁻ 1
²⁻ 3	1	2

^{3×} 1	^{6×} 2	3
3	1	^{2×} 2
^{6×} 2	3	1

^{3÷} 1	3	^{6×} 2
^{6×} 2	1	3
3	^{2×} 2	1

⁸⁺ 4	³⁺ 1	² 2	³ 3
1	⁶⁺ 4	³ 3	³⁺ 2
3	2	⁹⁺ 4	1
⁵⁺ 2	3	1	4

⁴ 4	⁶⁺ 3	1	2
⁷⁺ 3	4	⁵⁺ 2	⁸⁺ 1
⁵⁺ 1	2	3	4
2	⁵⁺ 1	4	3

⁸⁺ 3	2	⁵⁺ 1	4
⁴ 4	3	⁹⁺ 2	⁶⁺ 1
³⁺ 2	1	4	3
³⁻ 1	4	3	2

^{2÷} 2	^{12×} 4	^{3×} 3	1
4	3	^{2÷} 1	2
^{3×} 3	1	^{24×} 2	4
1	^{2÷} 2	4	3

^{2÷} 1	2	^{48×} 3	4
^{2÷} 2	1	⁴ 4	⁵⁺ 3
4	3	¹⁻ 1	2
⁷⁺ 3	4	2	¹ 1

¹⁻ 4	2	²⁻ 3	^{2÷} 1
3	^{12×} 4	1	2
^{2÷} 1	3	^{2÷} 2	4
2	⁸⁺ 1	4	3

¹⁰⁺ 3	5	2	⁹⁺ 4	⁵⁺ 1
³⁺ 2	¹ 1	¹⁵⁺ 3	5	4
1	⁵⁺ 2	4	⁷⁺ 3	5
⁹⁺ 4	3	5	⁶⁺ 1	2
5	⁵⁺ 4	1	2	3

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⁴ 4	⁸⁺ 1	3	⁶⁺ 2	¹²⁺ 5
³⁻ 5	² 2	4	1	3
2	⁴⁻ 5	1	3	4
⁹⁺ 3	4	2	⁴⁻ 5	1
²⁻ 1	3	⁹⁺ 5	4	² 2

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³⁻ 5	2	³⁺ 1	³ 3	⁹⁺ 4
^{2÷} 1	3	¹⁻ 2	^{20×} 4	5
2	4	⁷⁺ 3	5	¹⁻ 1
^{15×} 3	5	4	1	2
³⁻ 4	1	¹⁰⁺ 5	2	3

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¹⁻ 4	5	^{2÷} 1	2	^{60×} 3
^{2÷} 1	^{2÷} 2	²⁻ 3	5	4
2	4	5	¹⁻ 3	⁴⁻ 1
¹¹⁺ 3	^{2÷} 1	2	4	5
5	3	⁵⁺ 4	1	² 2

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^{15×} 5	⁵⁻ 6	⁷⁺ 4	3	¹⁻ 1	³⁻ 2
3	1	^{2÷} 6	²⁻ 4	2	5
²⁻ 4	¹⁰⁺ 2	3	⁴⁻ 6	5	1
6	5	1	2	¹⁷⁺ 4	3
^{2÷} 2	4	³⁻ 5	^{3÷} 1	3	6
^{3÷} 1	3	2	¹¹⁺ 5	6	4

³⁻ 1	4	5	6	3	^{3÷} 2
^{180×} 5	⁶⁺ 1	2	3	4	6
3	2	6	¹⁰⁺ 4	1	5
²⁻ 2	^{30×} 6	⁶⁺ 3	1	¹⁻ 5	4
4	5	1	2	^{18×} 6	3
⁶ 6	¹⁴⁺ 3	4	5	2	1

^{28×} 1	5	2	7	6	3	4
7	3	^{2÷} 4	2	¹⁴⁺ 5	6	1
4	^{2÷} 6	3	¹⁵⁺ 5	⁶⁻ 7	1	2
¹⁹⁺ 6	4	⁷ 7	3	¹⁰⁺ 1	⁷⁺ 2	5
5	1	¹⁰⁺ 6	4	2	³ 7	3
³ 3	^{28×} 2	⁴⁻ 1	¹⁰⁺ 6	4	²⁻ 5	7
2	7	5	^{3÷} 1	3	4	6

^{280×} 8	5	2	4	3	7	1	6
7	¹³⁺ 4	6	5	8	2	3	^{2÷} 1
³ 3	8	1	⁵⁻ 6	¹⁻ 5	³⁻ 4	7	2
^{2÷} 2	^{48×} 3	8	1	⁵ 6	5	4	7
4	¹⁻ 2	⁷ 7	^{48×} 8	1	6	5	3
⁴⁻ 1	⁵⁻ 6	³ 3	¹¹⁺ 7	4	8	³ 2	5
5	1	^{56×} 4	2	⁷ 7	^{2÷} 3	6	⁴⁻ 8
¹⁸⁺ 6	7	5	^{6×} 3	⁷⁻ 2	1	8	4

Bonus Puzzle:

2 3 4 6 7 9

^{3÷} 6	2	¹⁶⁺ 7	9	¹⁻ 3	4
^{12×} 3	4	⁴⁻ 6	2	²⁵⁺ 9	7
²⁻ 4	6	^{72×} 2	⁴⁻ 3	7	9
¹⁶⁺ 7	^{21×} 3	9	4	¹⁸⁺ 6	¹⁻ 2
9	7	¹⁴⁺ 4	6	2	3
⁷⁻ 2	9	3	7	4	⁶ 6