

**Thank you for participating in the KenKen Classroom Program!
 There are many ways to use KenKen with your students, including playing
 interactively online or using larger puzzles for teamwork solving.**

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THIS WEEK'S KENTERTAINMENT

Pennies and Scales

Imagine you have nine pennies and they all look identical. One penny weighs more than the other eight. You have to find the penny that weighs more by using a double-balance scale on which to weigh the pennies, but you can only use the scale twice.

How do you find the penny that weighs more?



Play free puzzles at www.kenken.com

Find the solution at the bottom of the answer key.

For more KenKen of all sizes and difficulty levels, visit www.kenken.com



+

3	3+	5+
6+		
		1

2-1 www.kenken.com

+

6+	4+	
		5+
3+		

2-2 www.kenken.com

+ -

2-	5+	2
		2-
1-		

2-3 www.kenken.com

+ -

2-		5+
1-		
2	2-	

2-4 www.kenken.com

x

6x		6x
3x		
		2

2-5 www.kenken.com

x ÷

3÷		6x
2÷	6x	
		1

2-6 www.kenken.com

+

4	5+		5+
6+	8+		
			5+
5+		2	

2-7 www.kenken.com

+

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

2-8 www.kenken.com

+ -

5+	7+	3+	
		5+	
1-	3+		1-
	3-		

2-9 www.kenken.com

× ÷

2÷	2×		3×
	12×		
3×		2÷	
	6×		4

2-10 www.kenken.com

+ - × ÷

1-		3+	2-
2÷			
2÷	4+	12×	
		2÷	

2-11 www.kenken.com

+ - × ÷ **Challenging**

2÷	1-	3	2÷
		4×	
9+			
	2÷		3

2-12 www.kenken.com

+

7+	10+	3+	5+	
			3	9+
3+		7+		
	10+	15+		
			3+	

2-13

www.kenken.com

+ -

4-		5+		6+
2-		5+		
3+	5+		8+	
	1-		7+	4-
11+				

2-14

www.kenken.com

+ - × ÷

9+	3-		5+	
	24×		3	
2÷		15×	1-	
			3-	2÷
12×				

2-15

www.kenken.com

+ - × ÷ **Challenging**

2-	40×		2÷	
	3		7+	
5+		60×		
1-	9+			2-
		4-		

2-16

www.kenken.com

+ - × ÷ Challenging

60×	11+		18×		3-
	7+			60×	
		5+			2-
96×			3+		
3÷			60×		
	30×			2-	

2-17

www.kenken.com

+ - × ÷ Extra Challenging

48×		11+	3÷	6	6+
10+				20×	
	3÷		2-		5+
		1			
3-	1-		3÷		2-
	3÷		2÷		

2-18

www.kenken.com

+ - × ÷ Challenging

$2 \div$	$13+$	$3+$	$56 \times$			$17+$
			$11+$			
$30 \times$					$11+$	7
$10+$	$24 \times$	$3 \div$				$10+$
		$2-$	$2 \div$	$10 \times$		
					$24 \times$	$3-$
$6-$		$1-$				

2-19

www.kenken.com

+ - × ÷ Extra Challenging

$1400 \times$		$3+$		$72 \times$		4	$8+$
	$21+$	$5-$			$10 \times$	$5-$	
		$1-$	$2 \div$				$14+$
$7+$			$5-$		$1-$		
	$10+$	$19+$		$10 \times$	$7-$	$35 \times$	
$6 \times$							$2 \div$
	$10+$	$13+$		$15+$	$22+$		
			3				

2-20

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

KenKen No-Operation (“No-Op”): There is still a target number, but the operation to get to the target number is not provided. Try to figure out which operations to use.
Hint: Any cage with three or more squares can only use addition or multiplication.

+ - × ÷ **Challenging**

15		1	2	5
	2			8
3	9			
	12	2	12	
			10	

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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+
3	1	2
6+	2	3
1	2	3
2	3	1

2-1 www.kenken.com

6+	4+	1
2	3	1
3	1	2
3+	1	2
1	2	3

2-2 www.kenken.com

2-	5+	2
1	3	2
3	2	1
1-	2	1
2	1	3

2-3 www.kenken.com

2-	5+	
3	1	2
1-	2	3
2	2-	3
2	3	1

2-4 www.kenken.com

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

2-5 www.kenken.com

3÷		6x
3	1	2
2÷	6x	3
1	2	3
2	3	1

2-6 www.kenken.com

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

2-7 www.kenken.com

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

2-8 www.kenken.com

5+	7+	3+
4	3	2
1	4	3
1	4	3
3	2	1
1-	3+	1-
3	2	1
2	1	4
2	1	4
2	1	4

2-9 www.kenken.com

2÷	2x	3x
4	2	1
2	4	3
2	4	3
3	1	4
3x	2÷	2
1	3	2
1	3	2
1	3	2
1	3	2

2-10 www.kenken.com

1-	3+	2-
3	4	2
2÷	4	2
4	2	1
2	1	3
2÷	4+	12x
2	1	3
1	3	4
1	3	4
1	3	4

2-11 www.kenken.com

2÷	1-	3	2÷
1	4	3	2
2	3	1	4
3	2	4	1
4	1	2	3
9+	4x	4	1
3	2	4	1
4	1	2	3
4	1	2	3
4	1	2	3

2-12 www.kenken.com

7+	10+	3+	5+
3	5	2	4
4	2	1	3
3+	7+	5	2
1	3	5	2
2	1	4	5
5	4	3	1
5	4	3	1
5	4	3	1
5	4	3	1

2-13 www.kenken.com

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

2-14 www.kenken.com

9+	3-	5+
4	2	5
5	4	2
2	3	1
2	3	1
1	5	3
3	1	4
3	1	4
3	1	4
3	1	4

2-15 www.kenken.com

2-	40x	2÷
3	5	4
5	3	2
4	1	5
1	2	3
2	4	1
2	4	1
2	4	1
2	4	1
2	4	1

2-16 www.kenken.com

60x	11+	18x	3-
2	5	6	
5	2	4	
6	1	2	
4	6	3	
3	4	1	
1	3	5	
1	3	5	
1	3	5	
1	3	5	

2-17 www.kenken.com

48x	11+	3÷	6	6+
4	3	5	2	6
3	4	2	6	1
1	6	4	3	5
6	2	1	5	4
3	1	5	4	3
2	5	6	1	3
5	1	3	4	2
5	1	3	4	2
5	1	3	4	2

2-18 www.kenken.com

2÷	13+	3+	56x	17+
3	6	1	7	4
6	7	2	1	3
2	5	3	4	6
5	4	6	2	7
4	3	5	6	1
1	2	7	3	5
7	1	4	5	2
7	1	4	5	2
7	1	4	5	2

2-19 www.kenken.com

1400x	3+	72x	4	6+
8	5	2	1	6
5	7	3	8	4
7	8	4	6	3
1	6	5	2	7
6	3	8	7	2
2	1	6	4	5
3	4	1	5	8
4	2	7	3	1
4	2	7	3	1

2-20 www.kenken.com

Bonus Puzzle:

15	1	2	5
3	1	4	2
5	2	3	1
2	4	5	3
1	5	2	4
4	3	1	5

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This Week's Kentertainment:

First you weigh 6 pennies, 3 on each side of the scale. If one side weighs more than the other, then the penny that weighs more is on that side. If the scale is balanced, that means the penny that weighs more is included in the group of pennies that haven't been weighed yet. Now you know which group of 3 the heaviest penny is in. Now take two of the pennies from that group and put them on each side of the scale. If one weighs more than the other, it is the heaviest penny. If they both weigh the same, the heaviest penny is the one that isn't on the scale.