



Learn a new puzzle

Sum Cages

Use 1 to 5 once in each row and column. Each cage makes its number: + adds, - takes away, × multiplies. A number can repeat in a cage if it is not in the same row or column.

Trick: Product Rooms**1**

5+		5+		25× ⑤
6+		12×		
4-			5+	
	9+	8×		7+
		10×		

The 5+ cage in column 3 can only be 1 + 4 or 2 + 3. Now row 1 has one place for the 5.

2

5+		5+		25× 5
6+		12×		①
4-			5+	
	9+	8×		7+
		10×		

Row 2, column 5 can only be 1. Every other number is ruled out.

3

5+		5+		25× 5
6+		12×	⑤	1
4-			5+	
	9+	8×		7+
		10×		

The 25× cage multiplies to 25. $5 \times 1 \times 5 = 25$, so this one is 5.

Try it

9+	2	13+		6×
6+		4+	7+	12+
4×	5			
	6×			

The answer is with the other answers.

Talk about it: Ask: Which two numbers from 1 to 5 multiply to make this cage?

**1****Sum Cages**

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



5+	3+		8+	
	11+	10+		
		4+		4
10+		9+		3+
	4+		4	

2**Sum Cages**

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



12+			7+	
6+	6+			
	9+	9+		3
6+		3+	6+	
			8+	

**3****Sum Cages**

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



5	7+	5+		9+
		4+		
4+		9+	6+	
5+	10+		7+	4+

4**Sum Cages**

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



6+		6+	12+	
4				6+
5	5+		6+	
9+	8+			
		8+		

**5****Sum Cages**

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



9+		4-	5+	7+
3+				
4	9+	5+	9+	3+
5+				
		4	6+	

6**Sum Cages**

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



10+	3+		14+	
	7+		5+	
	6+	8+		5+
			7+	
1-				1

**7****Sum Cages**

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



9+	4+		4	5+
	10+			
1		8+		9+
1-		3+		
7+			8+	

8**Sum Cages**

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



40×		2	3×	
	20×			15×
15×	24×			
	10+	4×		8×



9

Sum Cages

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



8+		20×		6+
4+			3	
	9+		2	9+
13+			5×	
	1-			



10

Sum Cages

Use 1 to 5 once in each row and column. Each cage makes its number with its sign. Numbers may repeat in a cage, not in a line.



7+		1	7+	
5+	6+		7+	
	11+		3+	
6+		12×		15×
	6+			



Answers

 For grown-ups. Cut off or keep this page aside until the puzzles are done.

Learn · Sum Cages

⁹⁺ 3	² 2	¹³⁺ 5	4	^{6×} 1
5	1	4	3	2
⁶⁺ 2	4	⁴⁺ 1	⁷⁺ 5	¹²⁺ 3
^{4×} 1	⁵ 5	3	2	4
4	^{6×} 3	2	1	5

#1

⁵⁺ 4	³⁺ 1	2	⁸⁺ 3	5
1	¹¹⁺ 4	¹⁰⁺ 5	2	3
2	5	⁴⁺ 3	1	⁴ 4
¹⁰⁺ 3	2	⁹⁺ 4	5	³⁺ 1
5	⁴⁺ 3	1	⁴ 4	2

The 4 cage in row 3 has one square, so it is 4.

#2

¹²⁺ 3	5	4	⁷⁺ 1	2
⁶⁺ 5	⁶⁺ 1	3	2	4
1	⁹⁺ 2	⁹⁺ 5	4	³ 3
⁶⁺ 4	3	³⁺ 2	⁶⁺ 5	1
2	4	1	⁸⁺ 3	5

The 3 cage has one square, so it is 3.

#3

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

The 5 cage has one square, so it is 5.

#4

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

The 4 cage has one square, so it is 4.

#5

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

Row 1, column 1 can only be 5. Every other number is ruled out.

#6

¹⁰⁺ 3	³⁺ 2	1	¹⁴⁺ 5	4
2	⁷⁺ 3	4	⁵⁺ 1	5
5	⁶⁺ 1	⁸⁺ 3	4	⁵⁺ 2
1	4	5	⁷⁺ 2	3
¹⁻ 4	5	2	3	¹ 1

The 10+ cage can only be 2 + 3 + 5. So row 2, column 1 can't be 1 or 4.

#7

⁹⁺ 5	⁴⁺ 3	1	⁴ 4	⁵⁺ 2
4	¹⁰⁺ 5	3	2	1
¹ 1	2	⁸⁺ 5	3	⁹⁺ 4
¹⁻ 3	4	³⁺ 2	1	5
⁷⁺ 2	1	4	⁸⁺ 5	3

The 4 cage has one square, so it is 4.

#8

^{40×} 4	5	² 2	^{3×} 3	1
2	^{20×} 1	4	5	^{15×} 3
^{15×} 1	^{24×} 4	3	2	5
5	¹⁰⁺ 3	^{4×} 1	4	^{8×} 2
3	2	5	1	4

The 40× cage: only 2 × 4 × 5 makes 40 with 1 to 5. So its squares are 2, 4 and 5.



Answers

 For grown-ups. Cut off or keep this page aside until the puzzles are done.

#9

⁸⁺ 3	5	^{20×} 1	4	⁶⁺ 2
⁴⁺ 2	1	5	³ 3	4
1	⁹⁺ 3	4	² 2	⁹⁺ 5
¹³⁺ 5	4	2	^{5×} 1	3
4	¹⁻ 2	3	5	1

The 5× cage: only 1×5 makes 5 with 1 to 5. So its squares are 1 and 5.

#10

⁷⁺ 4	3	¹ 1	⁷⁺ 5	2
⁵⁺ 2	⁶⁺ 1	5	⁷⁺ 3	4
3	¹¹⁺ 5	4	³⁺ 2	1
⁶⁺ 1	2	^{12×} 3	4	^{15×} 5
5	⁶⁺ 4	2	1	3

Column 1 adds up to 15 ($1 + 2 + 3 + 4 + 5$). The 5+ and 6+ cages inside it make 11, so the last square is 4.