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ANSWERS

lift-out in centre of book

Table squares

We can add numbers in a table square in the following way.

+	3	2
4	7	6
1	4	3

Complete the missing numbers in these addition squares.

You will have to think very hard about some of them.

1

+	4	1
2		3
1	5	

2

+	5	3
1		4
3		6

3

+	6	2
4		6
3		

4

+	7	4
1	8	
3		

5

+	6	5
		6
5		

6

+	2	3
		9
7		

7

+	8	2
	10	
5		

8

+		5
		8
4	10	

9

+		7
		8
4	12	

Addition squares

Complete the missing numbers in these addition squares.

Check carefully with your teacher that you understand how to add numbers in an addition square. You will have to think very hard about some of them.

1

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

2

+	5	3	9
4	9	7	13
2	7		
7			

3

+	8	2	
3		5	10
5			12
6			

4

+	4		6
5	9	8	
1		4	
2			

5

+	6	8	
4	7	10	
2	5		
5			

6

+	2	5	4
	10	13	
	8	11	
3	5		

7

+	3		2
	8	9	7
7	10	11	
8		12	

8

+	9		
	16	13	10
2		8	5
1		7	

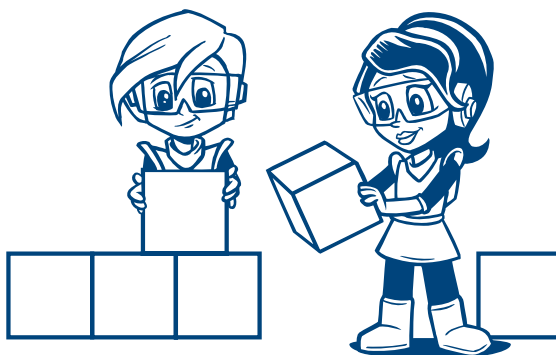
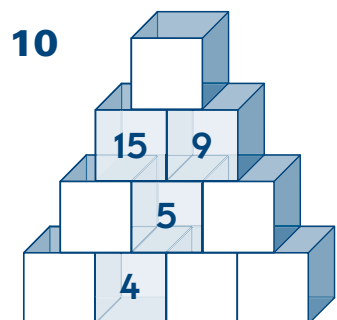
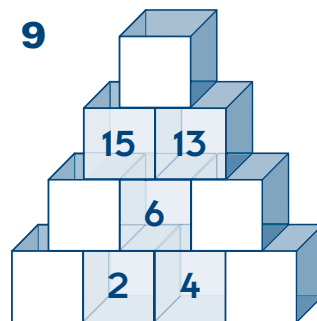
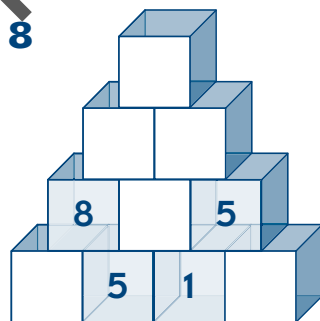
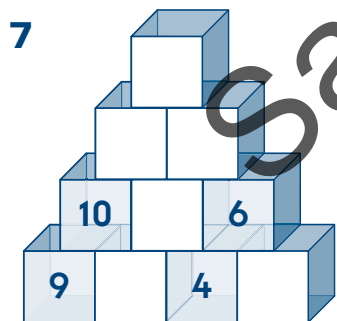
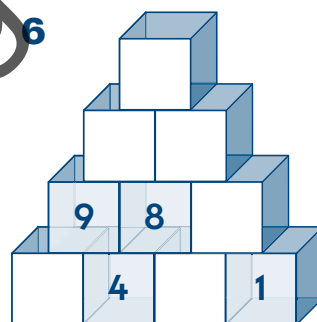
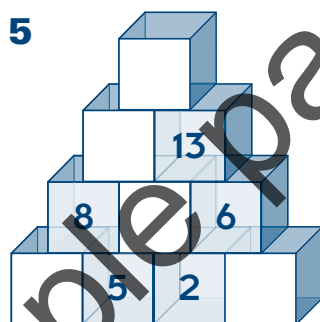
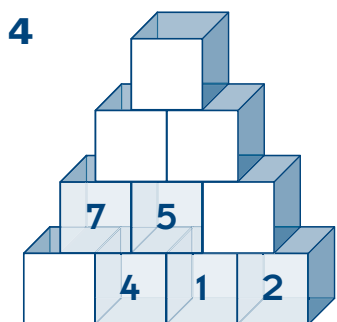
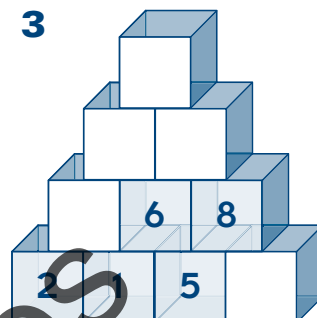
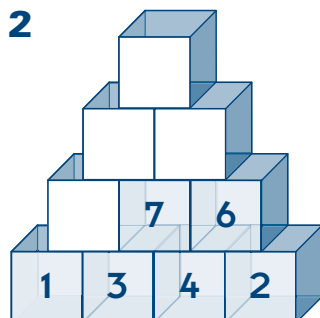
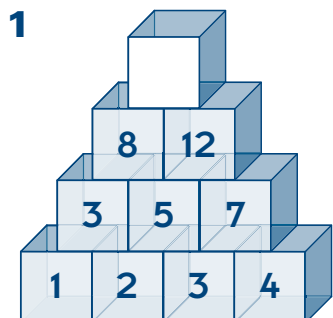
9

+		4	3
	15	11	
5	13		
	10	6	5

Bricks

A tower of bricks is built so that each new brick that is placed on top of two bricks is the sum of the numbers on these bricks.

Find the value of each missing brick.



Number sentences



Equipment: three sets of five counters numbered 1, 2, 3, 4 and 5

Use any three of the numbers **1, 2, 3, 4** or **5** to complete the number sentences below.

Use the counters to help you work out the solution.

You may use the same number two or three times in the same question so you can write $2 + 2 + 2 = 6$ or $1 + 2 + 3 = 6$.

1 $\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = 10$

2 $\underline{\quad} - \underline{\quad} + \underline{\quad} = 2$

3 $\underline{\quad} - \underline{\quad} + \underline{\quad} = 4$

4 $\underline{\quad} + \underline{\quad} + \underline{\quad} = 8$

5 $\underline{\quad} - \underline{\quad} - \underline{\quad} = 0$

6 $\underline{\quad} + \underline{\quad} + \underline{\quad} = 9$

7 $\underline{\quad} - \underline{\quad} + \underline{\quad} = 7$

8 $\underline{\quad} + \underline{\quad} + \underline{\quad} = 12$

9 $\underline{\quad} - \underline{\quad} + \underline{\quad} = 1$

10 $\underline{\quad} + \underline{\quad} - \underline{\quad} = 8$

11 $\underline{\quad} + \underline{\quad} - \underline{\quad} = 5$

12 $\underline{\quad} + \underline{\quad} + \underline{\quad} = 5$

13 $\underline{\quad} + \underline{\quad} + \underline{\quad} = 7$

14 $\underline{\quad} - \underline{\quad} + \underline{\quad} = 3$

15 $\underline{\quad} + \underline{\quad} + \underline{\quad} = 11$



Addition and subtraction

The teacher forgot to put + or - signs in the sums below.

Write the missing + or - signs in the boxes to make number sentences.

For example: to make $5 \square 3 \square 1 = 7$ into a number sentence, we need the symbols + and - since $5 + 3 - 1 = 7$.

1 $3 \square 2 \square 1 = 6$

2 $3 \square 2 \square 1 = 4$

3 $3 \square 2 \square 1 = 0$

4 $4 \square 3 \square 2 = 5$

5 $4 \square 2 \square 1 = 1$

6 $8 \square 2 \square 1 = 7$

7 $8 \square 5 \square 2 = 5$

8 $8 \square 2 \square 1 = 9$

9 $7 \square 4 \square 3 = 6$

10 $6 \square 2 \square 1 = 9$

11 $9 \square 2 \square 1 = 6$

12 $9 \square 2 \square 1 = 8$

13 $7 \square 6 \square 4 = 5$

14 $5 \square 5 \square 4 = 4$



Make up your own problems and ask friends or your parents to solve them.

Number patterns

Look for a pattern in the numbers below and continue it for two more numbers. It is always helpful to find the difference between two numbers next to one another as shown in this example.



- 1 3, 5, 6, 8, 9, 11, _____ , _____
- 2 1, 6, 8, 13, 15, 20, _____ , _____
- 3 25, 23, 22, 20, 19, 17, _____
- 4 5, 9, 7, 11, 9, 13, _____
- 5 65, 60, 50, 45, 35, 30, _____ , _____
- 6 35, 45, 40, 50, 45, 55, _____ , _____
- 7 24, 32, 22, 30, 20, 28, _____ , _____
- 8 17, 22, 20, 25, 23, 28, _____ , _____
- 9 43, 33, 40, 30, 37, 27, _____ , _____
- 10 39, 30, 36, 27, 33, 24, _____ , _____
- 11 1, 2, 4, 7, 11, 16, _____ , _____
- 12 1, 3, 6, 10, 15, 21, _____ , _____

Find my rule

In the following questions, find the rule between the IN numbers and the OUT numbers. Find all the missing OUT numbers for each IN number given.

In the first question the rule is: **add 3 to the IN number to get the OUT number.**

1	IN:	6	11	1	8	2	5	9	10	4	Rule
	OUT:	9	14	4	11						+ 3

2	IN:	6	3	11	8	7	5	9	10	4	Rule
	OUT:	3	0	8	5						

3	IN:	6	11	1	8	2	5	9	10	4	Rule
	OUT:	13	18	8	15						

4	IN:	6	11	8	12	7	5	9	10	4	Rule
	OUT:	2	7	4	8						

5	IN:	6	11	13	8	2	5	9	10	4	Rule
	OUT:	4	9	11	6						

6	IN:	6	11	1	8	2	5	9	10	4	Rule
	OUT:	15	20	10	17						

7	IN:	6	11	13	8	12	5	9	10	7	Rule
	OUT:	1	6	8	3						

8	IN:	6	11	1	8	2	5	9	10	4	Rule
	OUT:	17	22	12	19						

9	IN:	6	11	1	8	2	5	9	10	4	Rule
	OUT:	12	22	2	16						

10	IN:	6	3	1	8	2	5	9	10	4	Rule
	OUT:	4	7	9	2						

Follow the rules

In the following questions find the rule between the IN numbers and the OUT numbers and write down the missing OUT numbers.

In the first question the rule is: **add 5 to the IN number to get the OUT number.**

1	IN:	6	11	1	8	12	15	7	20	14	Rule
	OUT:	11	16	6	13						+ 5

2	IN:	16	11	13	8	12	15	9	10	6	Rule
	OUT:	10	5	7	2						

3	IN:	6	11	1	8	2	5	9	10	4	Rule
	OUT:	30	55	5	40						

4	IN:	6	11	1	8	2	5	9	10	4	Rule
	OUT:	16	21	11	18						

5	IN:	6	11	1	8	2	5	9	10	4	Rule
	OUT:	26	31	21	28						

6	IN:	6	3	1	8	2	5	9	10	4	Rule
	OUT:	66	33	11	88						

7	IN:	6	3	1	8	2	5	9	10	4	Rule
	OUT:	60	30	10	80						

8	IN:	6	3	1	8	2	5	9	10	4	Rule
	OUT:	62	32	12	82						

9	IN:	6	11	1	8	2	5	9	10	4	Rule
	OUT:	18	33	3	24						

10	IN:	15	10	55	30	25	60	5	20	35	Rule
	OUT:	3	2	11	6						

Related rows

In the questions below there is a relationship between the numbers in the first row and those in the second row. In the first question, each number in the second row is three more than the one above it.

Write down the rule for each question and then find the missing numbers.

1

13	5	9	6	8	
16	8	12	9		10

Rule

add 3

2

12	20	4	7	2	
17	25	9	12		11

3

14	7	16	5	9	
12	5	14	3		4

4

15	4	11	7	5	
25	14	21	17		30

5

5	8		5	2	
50	80	10	50		40

6

4	1	12	3	9	
11	8	19	10		15

7

6	2	8	3	9	
12	4	16	6		8

8

4	10	7	1	5	
13	19	16	10		20

9

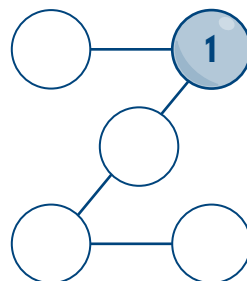
14	26	18	32	12	
3	15	7	21		5

Numbers in circles

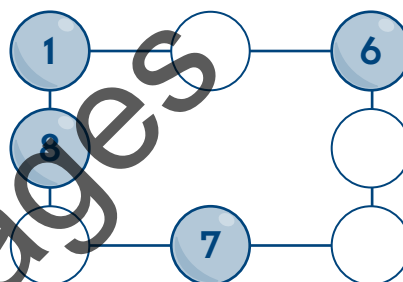


Equipment: one set of counters numbered 2, 3, 4, 5 and 6

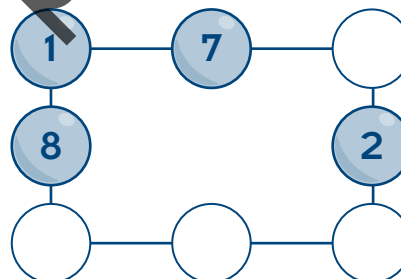
- 1** Write the numbers 2, 3, 4 and 5 in the circles so that the sum of the numbers in each line is 6.



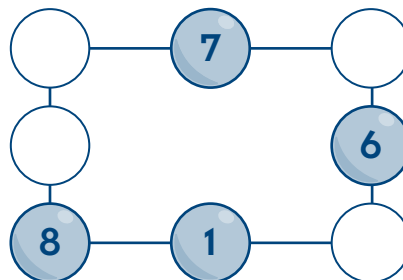
- 2** Write the numbers 2, 3, 4 and 5 in the circles so that the sum of the numbers in each line is 12.



- 3** Write the numbers 3, 4, 5 and 6 in the circles so that the sum of the numbers in each line is 13.



- 4** Write the numbers 2, 3, 4 and 5 in the circles so that the sum of the numbers in each line is 14.



- 5** Write the numbers 2, 3, 4, 5 and 6 in the circles so that the sum of the numbers in each line is 15.

