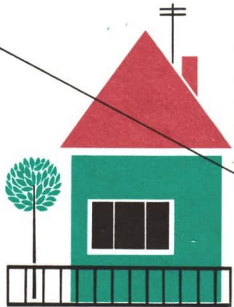
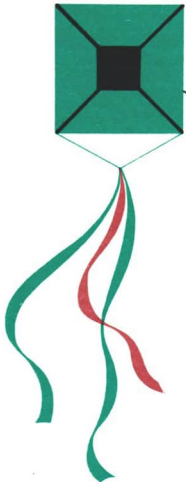


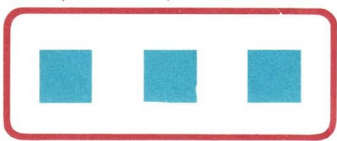
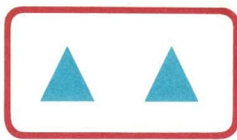
Mathematik

1



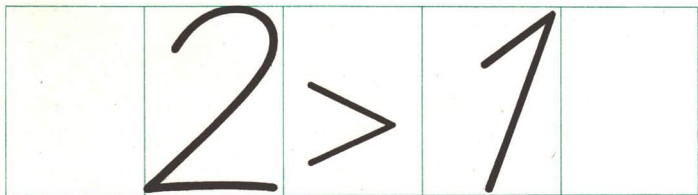
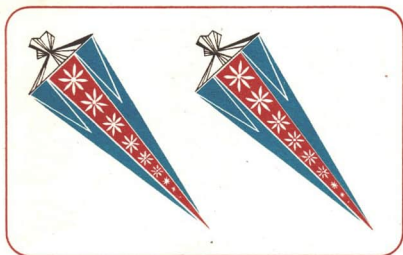
$$2 + 1 = 3$$



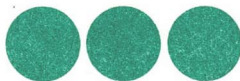
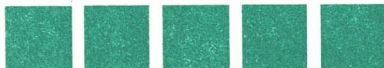
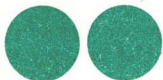
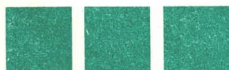
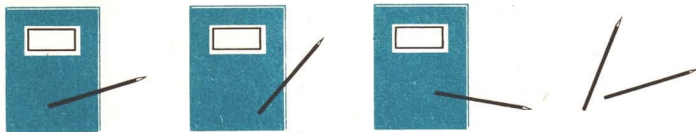


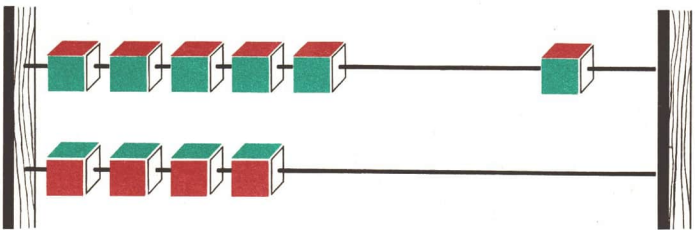
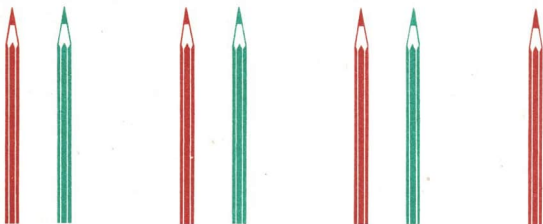
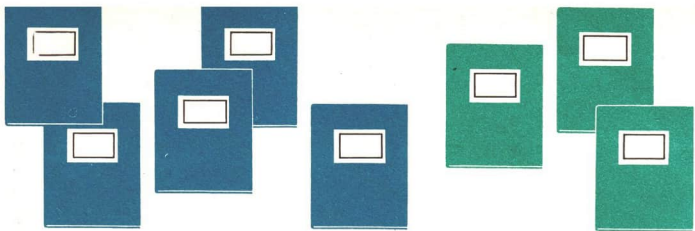
Mathematik

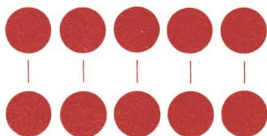
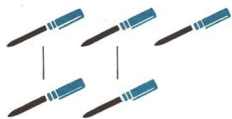
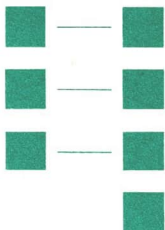
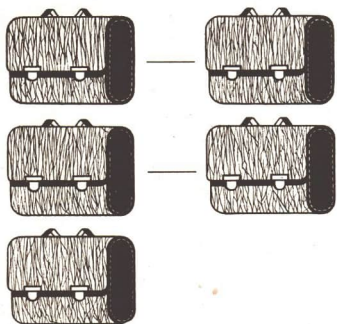
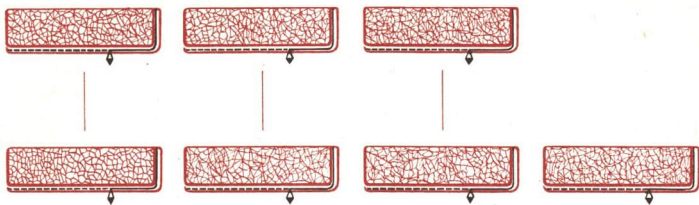
Lehrbuch für Klasse 1





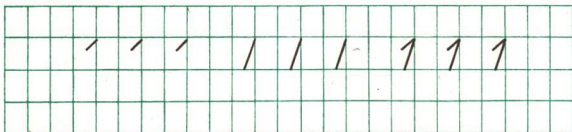


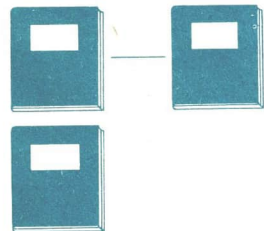
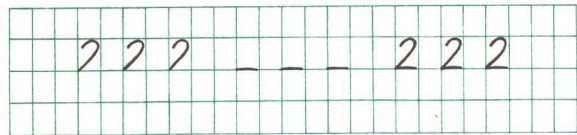
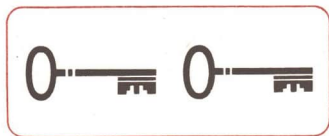
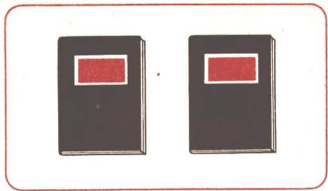
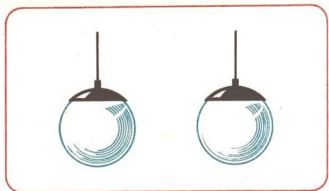


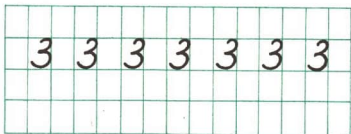
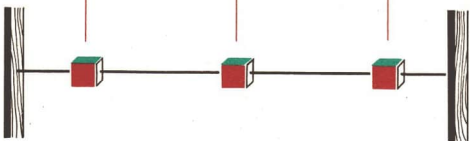


Die natürlichen Zahlen von 1 bis 10

Die Zahlen von 1 bis 5

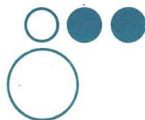
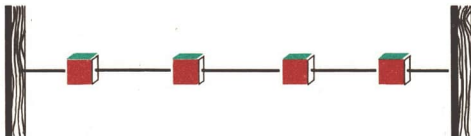


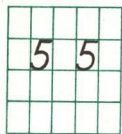
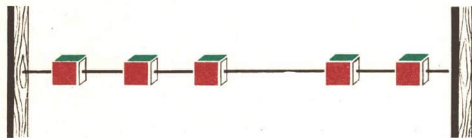
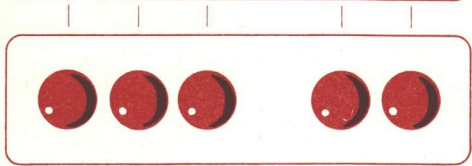
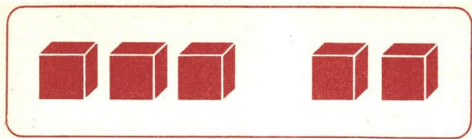


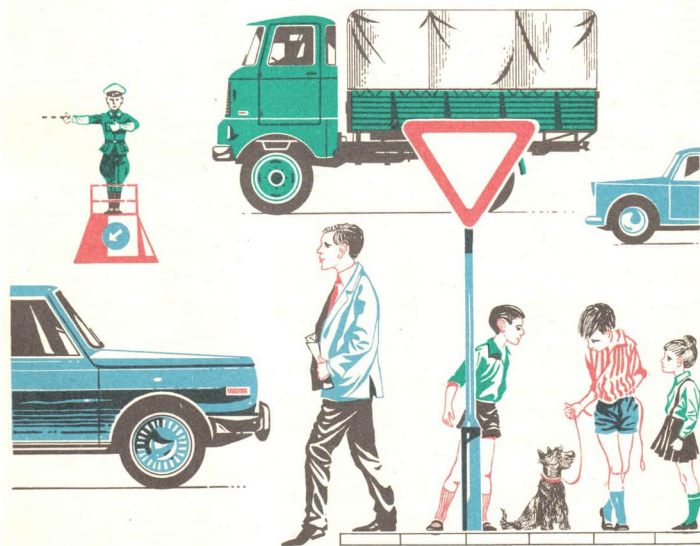
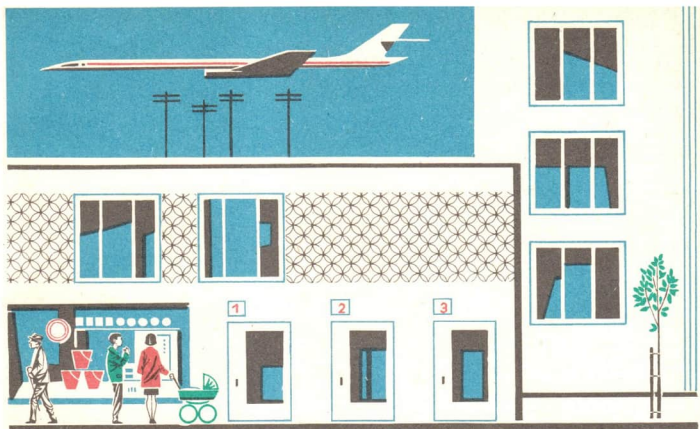




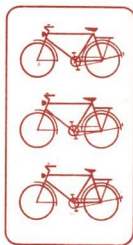
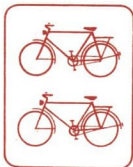
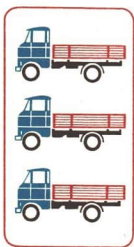
4







„ist kleiner als“ „ist größer als“ „ist gleich“

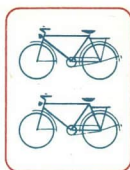
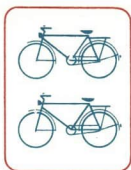


$2 < 3$ $3 > 2$

< Das ist das Zeichen für „ist kleiner als“.
 > Das ist das Zeichen für „ist größer als“.

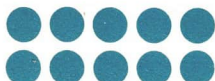
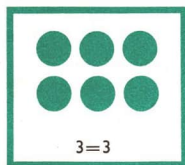
			$2 < 3$
			$3 > 2$





$$2=2$$

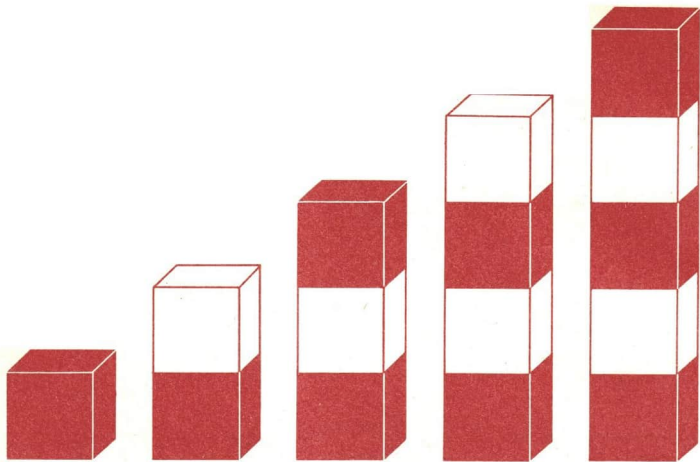
= Das ist das Zeichen für „ist gleich“



4	>	3
4	=	4
5	>	1
2	<	3
3	<	5

1	4
5	3
2	2
1	2
3	1

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



$1 < 2$

$2 < 3$

$3 < 4$

$4 < 5$

$1 < 2$

$2 < 3$

$3 < 4$

$4 < 5$

$2 > 1$

$3 > 2$

$4 > 3$

$5 > 4$

1, 2, 3, 4, 5, ...

Die Zahlen sind der Größe nach geordnet.

1	=	1
2	>	1
3	>	1
4	>	1
5	>	1

①

1	2
2	2
3	2
4	2
5	2

②

1	3
2	3
3	3
4	3
5	3

③

1	4
2	4
3	4
4	4
5	4

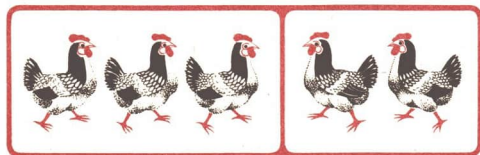
④

1	5
2	5
3	5
4	5
5	5

Vereinigen von Mengen und Addieren



$3+2$



5

$3+2=5$

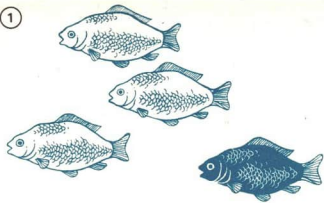
+ Das ist das Zeichen für „plus“.





$$3+1=4$$

①



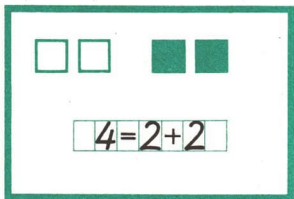
②



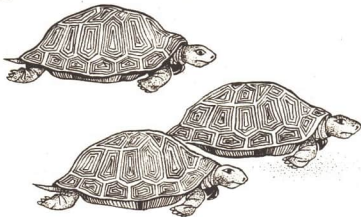
③

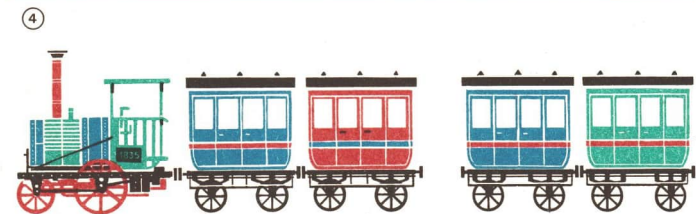
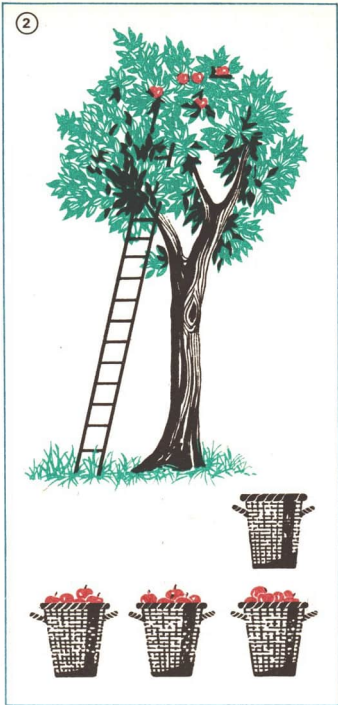
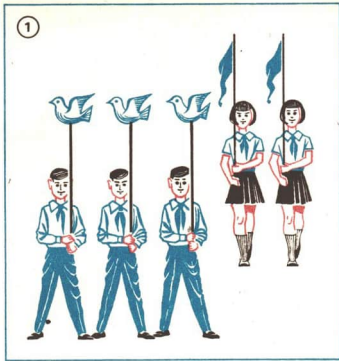


④

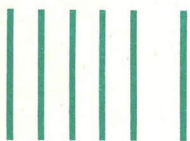
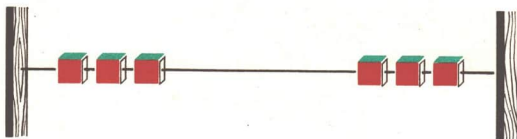
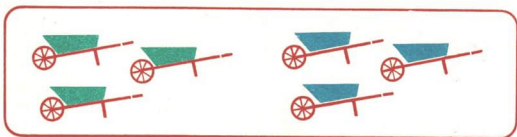


⑤





6



①



②



③





$5 < 6$	$6 > 5$
---------	---------

$6 > 5$
 $3 < 5$
 $6 > 2$

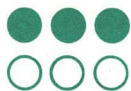
①

$6 \quad 3$
 $2 \quad 4$
 $1 \quad 1$

②

	5	3		1	2		4	5	
	2	4		2	3		5	6	
	4	4		3	4		6	6	

③ $1 < 2$ $2 < 3$... $5 < 6$



$3 + 3 = 6$

④

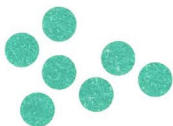
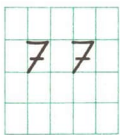
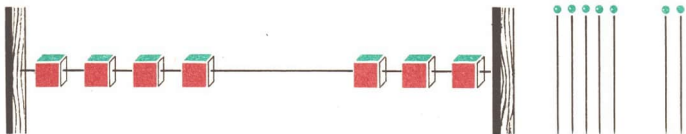
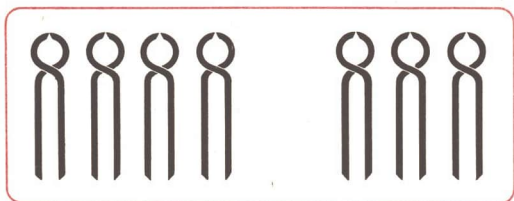
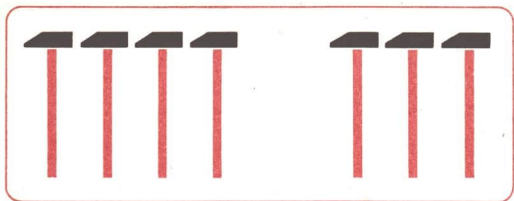


⑤

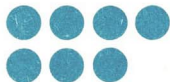


$6 = 5 + 1$



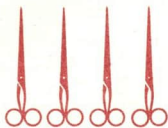


①



②





$6 < 7$	$7 > 6$
---------	---------

7	>	6		
3	<	7		
5	<	7		

①

4		7		
7		7		
2		7		

②

4	2
3	5
7	1

③

1	2
2	3
3	4

④

4	5
5	6
6	7

⑤ $1 < 2$ $2 < 3$... $6 < 7$



4	+	3	=	7
---	---	---	---	---

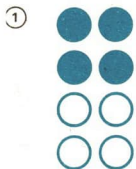
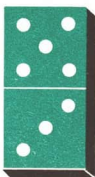
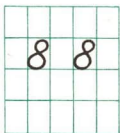
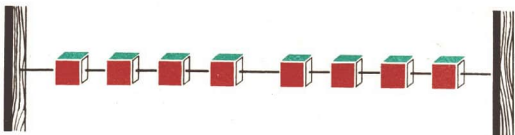
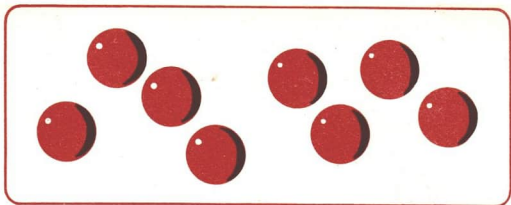
⑥

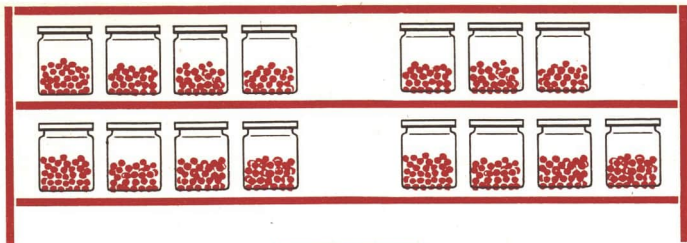


7	=	4	+	3
---	---	---	---	---

⑦







$7 < 8$	$8 > 7$
---------	---------

8	>	4
5	<	8
8	=	8

①

8	3
4	6
3	3

②

6	2
5	5
1	8

③

2	3
3	4
4	5

④

5	6
6	7
7	8

⑤ $1 < 2$ $2 < 3$... $7 < 8$



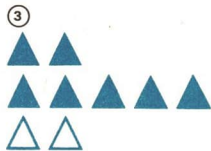
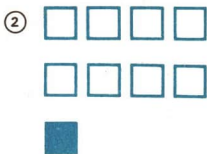
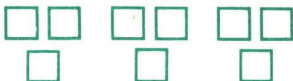
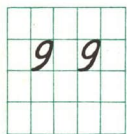
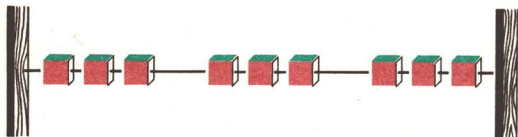
$4 + 4 = 8$

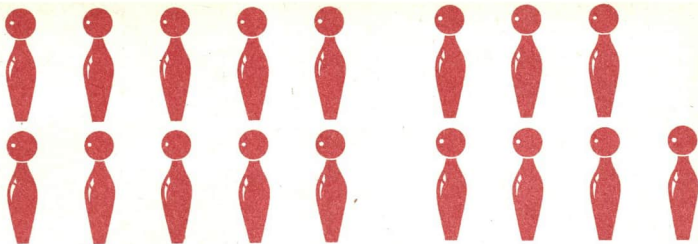
⑥



$8 - 4 + 4$

⑦





$8 < 9$	$9 > 8$
---------	---------

	9	>	5	
	6	<	9	
	9	=	9	

①

	9	4
	3	7
	4	4

②

7	9
8	1
7	7

③

3	4
4	5
5	6

④

6	7
7	8
8	9

⑤ $1 < 2$ $2 < 3$... $8 < 9$

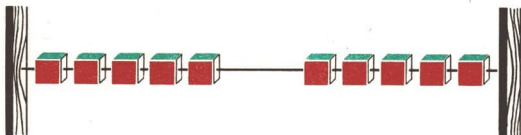
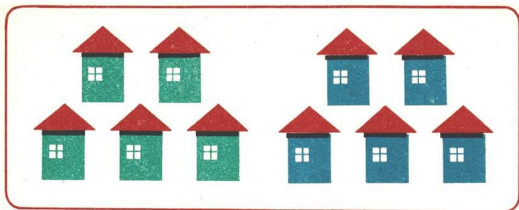


$5 + 4 = 9$

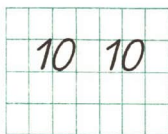


$9 = 6 + 3$

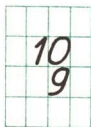


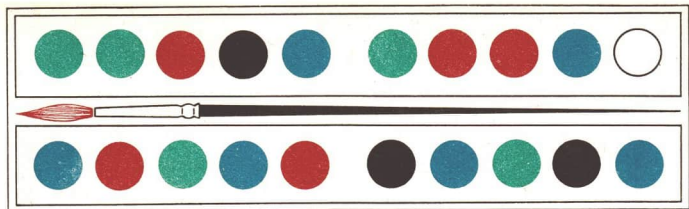


10



10





$$9 < 10 \quad 10 > 9$$

$3 < 10$
 $10 > 4$
 $10 = 10$

①

$10 > 8$
 $7 < 10$
 $10 > 5$

②

$9 < 4$
 $3 < 7$
 $9 < 9$

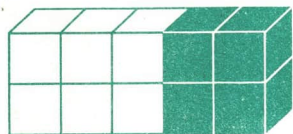
③

$4 < 5$
 $5 < 6$
 $6 < 7$

④

$7 < 8$
 $8 < 9$
 $9 < 10$

⑤ $1 < 2 \quad 2 < 3 \quad \dots \quad 9 < 10$

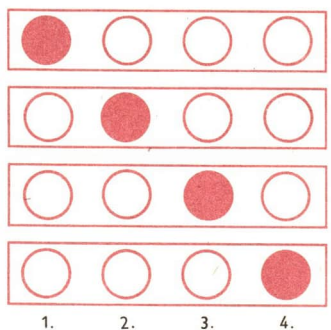
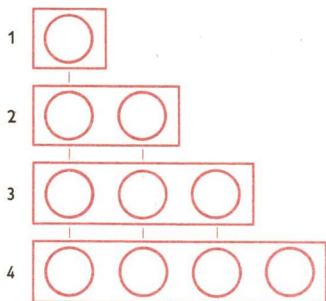
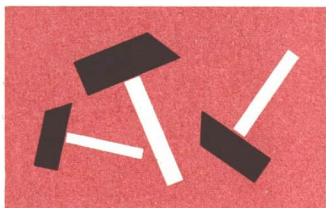
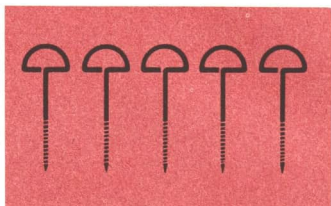
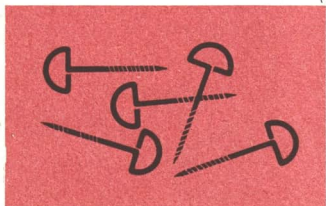


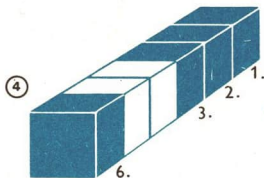
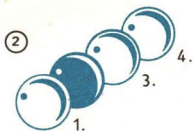
$$6 + 4 = 10$$

⑥

$$10 = 8 + 2$$

⑦







$$6 < 7$$

$$7 > 6$$

$$1 < 2 \quad 2 < 3 \quad \dots \quad 9 < 10$$

6 ist der Vorgänger von 7.

7 ist der Nachfolger von 6.



$$5 < 6$$

$$5 > 4$$

①



②



③



④



⑤



+

.

Das sind Punkte.

×

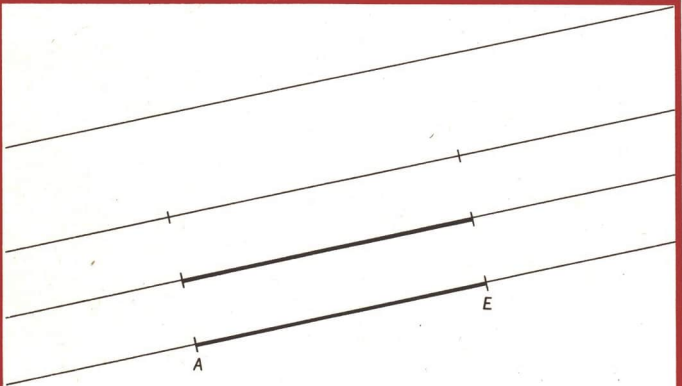
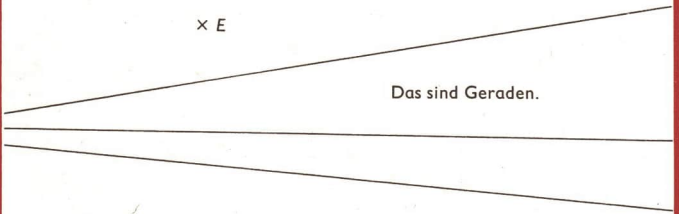
Punkte werden mit
Großbuchstaben bezeichnet.

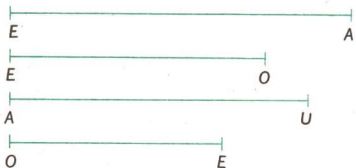
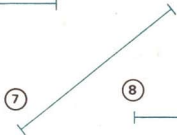
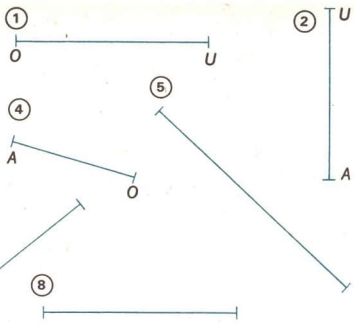
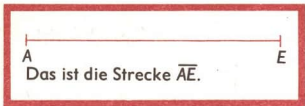
+ A

.U

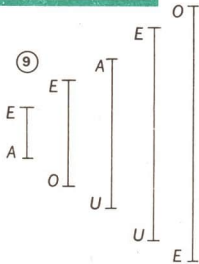
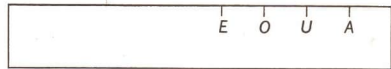
× E

Das sind Geraden.



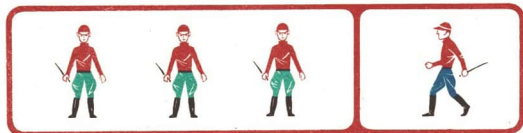


Die Strecke \overline{EA} ist länger als die Strecke \overline{EO} .



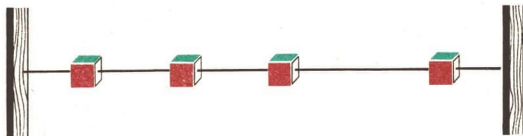
Diese Strecken sind gleich lang.





3+1

$3+1=4$



4

$3+1=4$ ist eine Gleichung. 3 und 1 sind hier Summanden.



$3+1=4$

①



②



$$3+1$$



$$3+1=4$$

③

$$\begin{array}{|l} 1+1 \\ 2+1 \\ 3+1 \\ 4+1 \end{array}$$

④

$$\begin{array}{|l} 5+1 \\ 2+2 \\ 3+2 \\ 4+2 \end{array}$$

⑤

$$\begin{array}{|l} 3+3 \\ 4+1 \end{array}$$

⑥

$$\begin{array}{|l} 3+1 \\ 5+1 \end{array}$$

⑦

$$\begin{array}{|l} 1+1 \\ 2+2 \end{array}$$

⑧

$$\begin{array}{|l} 4+2 \\ 3+2 \end{array}$$

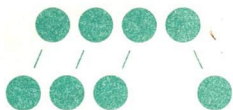
$$\boxed{2+1=3}$$

⑨



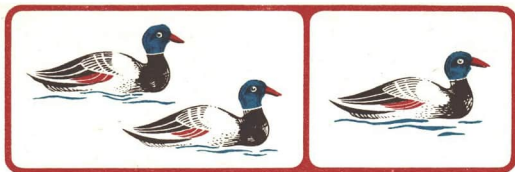


$$3 = 2 + 1$$



$$4 = 3 + 1$$





$$2+1=3$$

$$2+1=1+2$$

$$1+2=3$$

$2+1=3$
 $1+2=3$ Summanden kann man vertauschen.



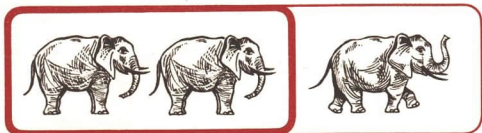
3	+	1	=	4
1	+	3	=	4

- ①
- ② $2+1$ | $1+2$
- ③ $4+1$ | $1+4$
- ④ $5+1$ | $1+5$
- ⑤ $3+2$ | $2+3$
- ⑥ $4+2$ | $2+4$
- ⑦ $2+2$ | $3+3$

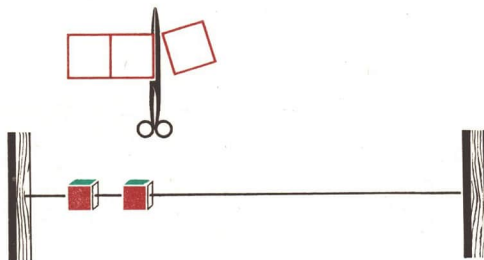
- ⑧
- | | | | |
|-------|-------|-------|--|
| $1+1$ | $2+2$ | $3+3$ | |
| $2+1$ | $3+2$ | | |
| $3+1$ | $4+2$ | | |
| $4+1$ | | | |
| $5+1$ | | | |

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

Subtrahieren



$3-1$



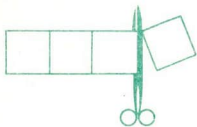
2

$3-1=2$

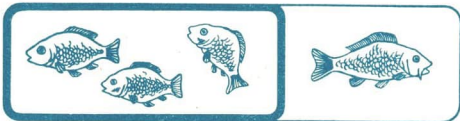
$3-1=2$ ist eine Gleichung.

— Das ist das Zeichen für „minus“.

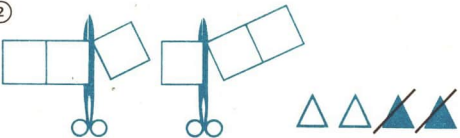




①

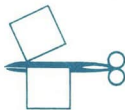


②



$$4 - 1 = 3$$

③



$$3 - 1 = 2$$

④



⑤

$$\begin{array}{|l} 2-1 \\ 4-2 \end{array}$$

⑥

$$\begin{array}{|l} 5-1 \\ 3-2 \end{array}$$

⑦

$$\begin{array}{|l} 5-3 \\ 4-1 \end{array}$$

⑧

$$\begin{array}{|l} 6-1 \\ 6-2 \end{array}$$

$$\begin{array}{|l} 5-2 \\ 4-3 \end{array}$$

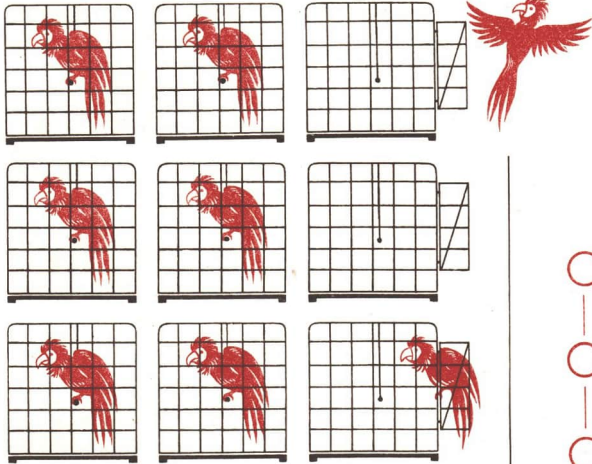
⑨



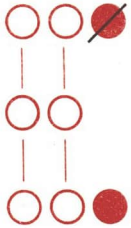
⑩



Addieren und Subtrahieren

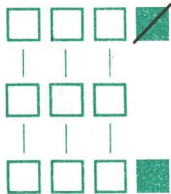


$3 - 1 = 2$ $2 + 1 = 3$

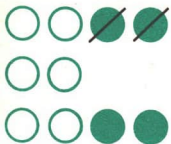


$$3 - 1 = 2$$

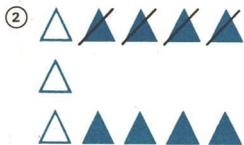
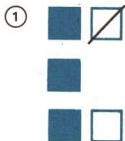
$$2 + 1 = 3$$



4	-	1	=	3
3	+	1	=	4



4	-	2	=	2
2	+	2	=	4



$4 - 1 = 3$

$3 + 1 = 4$



③

$3 - 1$

$2 - 1$

$6 - 3$

$5 - 2$

$4 - 2$

$5 - 1$

④



5	-	2	=	3
3	+	2	=	5

⑤

$2 - 1$

$3 - 1$

$4 - 1$

$5 - 1$

$6 - 1$

⑥

$3 - 2$

$4 - 2$

$5 - 2$

$6 - 2$

3	<	10
5	=	5
8	>	6

⑦

$10 - 5$

$10 - 6$

$10 - 2$

⑧

$3 + 10$

$4 + 10$

$7 + 10$

⑨

$6 + 2$

$4 + 4$

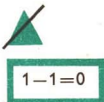
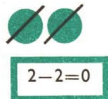
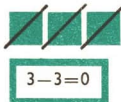
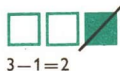
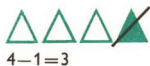
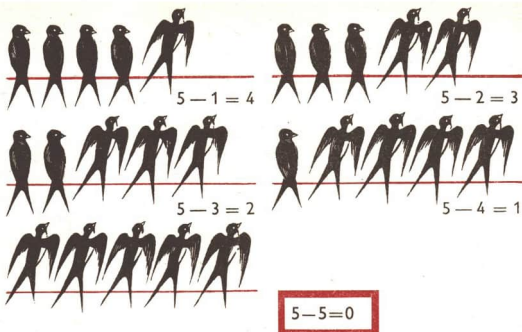
$7 + 9$

⑩

$9 + 10$

$8 + 2$

$8 + 8$

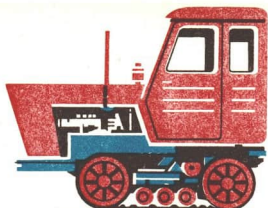


$0 < 1$	$1 > 0$	$1 + 0 = 1$	$1 - 0 = 1$
$0 < 2$	$2 > 0$	$2 + 0 = 2$	$2 - 0 = 2$

$1 - 1 = 0$
$2 - 2 = 0$
$3 - 3 = 0$
$4 - 4 = 0$
$5 - 5 = 0$

①	0 3	②	3 0	③	3 + 0	④	3 - 0
	0 4		4 0		4 + 0		4 - 0
	0 5		5 0		5 + 0		5 - 0

①



4	+	1	=	5
1	+	4	=	5

②

3+2
2+3

3+1
1+3

2+1
1+2

4+2
2+4

③

1+0
4+2
3+2

2+2
4+0
3+3

1+3
2+3
3+0

5+0
2+4
1+4

1+2
2+0
5+1

④

1-0
4-2
6-3
2-1
5-3

⑤

3-0
1-1
3-3
4-1
6-2

⑥

4-4
6-5
2-0
3-1
5-2

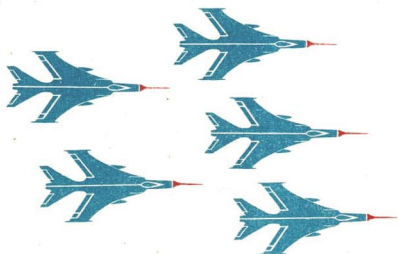
⑦

5-1
4-0
6-1
3-2
5-4

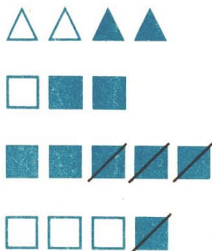
⑧

5-5
5-0
2-2
4-3
6-0

⑨



⑩



$4+2$



$4+2=6$

①

$6+1$

$8+2$

$8+0$

$9+0$

$6+2$

$8+1$

$7+0$

$9+1$

$5+2$

$7+2$

$7+1$

$10+0$

②

$3+2$

$6+2$

$2+1$

$1+2$

$5+1$

$1+1$

$8+2$

$4+2$

$8+0$

$9+1$

$7+2$

$3+1$

$7+1$

$5+2$

$7+0$

$4+1$

$9+0$

$8+1$

$6+1$

$2+2$

③

$6-2$



$6-2=4$

④

$7-2$

$8-0$

$9-1$

$9-0$

$8-1$

$8-2$

$10-2$

$7-0$

$7-1$

$9-2$

$10-0$

$10-1$

⑤

$4-2$

$7-1$

$6-1$

$9-1$

$8-2$

$3-2$

$6-2$

$5-1$

$9-2$

$8-0$

$5-2$

$8-1$

$2-2$

$2-1$

$10-2$

$7-0$

$10-1$

$7-2$

$3-1$

$4-1$

⑦

$5+1$

$4+2$

$6-1$

$6-2$

$5+0$

$6+1$

$5+2$

$7-1$

$7-2$

$6+0$

$7+1$

$6+2$

$8-1$

$8-2$

$8+0$

$8+1$

$7+2$

$9-1$

$9-2$

$9-9$

$9+1$

$8+2$

$10-1$

$10-2$

$5-5$

⑧


⑨

⑩



①

5+3



5+3=8

②

4+3	5+4	3+2	4+2
6+3	6+4	5+3	6+2
5+3	4+4	7+1	7+3
7+3	5+5	6+4	9+0


③

6+1	9+1	5+2	4+4	6+3
2+2	6+3	7+0	5+1	8+1
5+4	2+1	7+2	3+3	5+5

④

⑤

8-3



8-3=5

⑥

7-3	9-4	8-1	8-3
10-3	8-4	10-3	8-2
8-3	10-4	4-2	7-1
9-3	10-5	7-2	3-1

⑦

6-3	9-0	9-1	10-1	5-2
6-1	9-4	8-0	9-2	8-4
10-4	7-0	10-2	10-5	7-3

⑧

4+3	4+4	7-3	8-4	7-2
5+3	5+4	8-3	9-4	8-2
6+3	6+4	9-3	10-4	9-2
7+3	5+5	10-3	10-5	10-2

⑨

⑩





$$2+6=8$$

$$6+2=8$$

①

1+2
1+8
0+6
2+5
1+4

3+4
2+7
0+5
1+3
4+6

②

0+7
1+9
2+3
3+5
3+4

③

1+5
2+8
0+4
3+6
4+5

1+7
2+6
1+6
0+3
3+7

1+1
2+2
3+3
4+4
5+5

$$8-6=2$$

$$8-6=2$$

oder

$$2+6=8$$

$$6+2=8$$

④

4-3
8-5
9-6
7-5
3-3

7-4
7-7
6-5
3-2
8-7

⑤

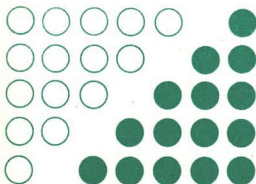
9-7
10-9
10-8
9-8
8-6

10-6
6-4
9-5
5-4
10-7

⑥

5-5
5-3
4-4
6-6
7-6

2-1
4-2
6-3
8-4
10-5



$$6=5+1$$

$$6=4+2$$

$$6=3+3$$

$$6=2+4$$

$$6=1+5$$

⑦

$$7=6+1$$

⋮

⑨

$$5=4+1$$

⋮

⑧

$$8=7+1$$

⋮

⑩

$$9=8+1$$

⋮

①

$$\begin{array}{l} 0+0 \\ 1+0 \\ 0+1 \end{array}$$

$$\begin{array}{l} 1+1 \\ 2+1 \\ 1+2 \end{array}$$

$$\begin{array}{l} 2+2 \\ 3+2 \\ 2+3 \end{array}$$

$$\begin{array}{l} 3+3 \\ 4+3 \\ 3+4 \end{array}$$

$$\begin{array}{l} 4+4 \\ 5+4 \\ 4+5 \end{array}$$

$$\begin{array}{l} 5+5 \\ 4+5 \\ 5+4 \end{array}$$

②

$$\begin{array}{l} 5+1 \\ 6+1 \\ 7+1 \\ 8+1 \\ 9+1 \end{array}$$

$$\begin{array}{l} 1+5 \\ 1+6 \\ 1+7 \\ 1+8 \\ 1+9 \end{array}$$

$$\begin{array}{l} 0+2 \\ 2+2 \\ 4+2 \\ 6+2 \\ 8+2 \end{array}$$

$$\begin{array}{l} 1+2 \\ 3+2 \\ 5+2 \\ 7+2 \end{array}$$

$$\begin{array}{l} 3+3 \\ 4+3 \\ 5+3 \\ 6+3 \\ 7+3 \end{array}$$

$$\begin{array}{l} 3+3 \\ 3+4 \\ 3+5 \\ 3+6 \\ 3+7 \end{array}$$

③

④

⑤

$$\begin{array}{l} 6-1 \\ 7-1 \\ 8-1 \\ 9-1 \\ 10-1 \end{array}$$

$$\begin{array}{l} 6-2 \\ 7-2 \\ 8-2 \\ 9-2 \\ 10-2 \end{array}$$

$$\begin{array}{l} 5-0 \\ 5-1 \\ 5-2 \\ 5-3 \\ 5-4 \end{array}$$

$$\begin{array}{l} 7-2 \\ 7-3 \\ 7-4 \\ 7-5 \\ 7-6 \end{array}$$

$$\begin{array}{l} 4-0 \\ 4-1 \\ 4-2 \\ 4-3 \\ 4-4 \end{array}$$

$$\begin{array}{l} 8-7 \\ 7-6 \\ 6-5 \\ 5-4 \\ 4-3 \end{array}$$

⑥



⑦

$$\begin{array}{l} 3+4 \\ 6+2 \\ 7+1 \end{array}$$

$$\begin{array}{l} 4+6 \\ 7+2 \\ 6+3 \end{array}$$

$$\begin{array}{l} 3+2 \\ 2+6 \\ 1+8 \end{array}$$

$$\begin{array}{l} 8-5 \\ 7-4 \\ 6-2 \end{array}$$

$$\begin{array}{l} 10-6 \\ 4-3 \\ 7-7 \end{array}$$

$$\begin{array}{l} 10-3 \\ 10-4 \\ 10-7 \end{array}$$

⑧

⑨

$$\begin{array}{l} 9-9 \\ 7-2 \\ 4+2 \end{array}$$

$$\begin{array}{l} 8-2 \\ 6+4 \\ 6-5 \end{array}$$

$$\begin{array}{l} 10-10 \\ 7-5 \\ 5-4 \end{array}$$

$$\begin{array}{l} 8-0 \\ 4+3 \\ 5-2 \end{array}$$

$$\begin{array}{l} 4-4 \\ 10-8 \\ 3+7 \end{array}$$

$$\begin{array}{l} 2+8 \\ 6-3 \\ 9-5 \end{array}$$

⑩



$8-3=5$

$5+3=8$



①

$2+7$

$2+4$

$6+3$

$2+8$

$3+4$

$7+3$

$9-2$

$6-2$

$9-3$

$10-2$

$7-3$

$10-3$

$9-7$

$6-4$

$9-6$

$10-8$

$7-4$

$10-7$

②

$5+3$

$3+5$

$1+1$

$8-3$

$8-5$

$2-1$

$7+2$

$2+7$

$2+2$

$9-3$

$9-7$

$4-2$

$8+1$

$1+8$

$3+3$

$9-1$

$9-8$

$6-3$

$6+2$

$2+6$

$4+4$

$8-2$

$8-6$

$8-4$

$4+3$

$3+4$

$5+5$

$7-3$

$7-4$

$10-5$

③

④

⑤

⑥

⑦



$4-1=3$



$4-2=2$



$4-3=1$



$4-4=0$

⑧

$5-2$

$5-3$

$5-4$

$5-5$

⑨

$7-4$

$7-5$

$7-6$

$7-7$

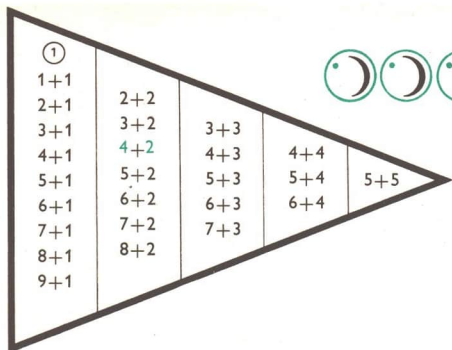
⑩

$3-0$

$3-1$

$3-2$

$3-3$



$4+2=6$ $2+4=6$

②

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

③		④		⑤		⑥	
10-1	9-1	8-1	7-1	6-1	5-1	4-1	3-1
10-2	9-2	8-2	7-2	6-2	5-2	4-2	3-2
10-3	9-3	8-3	7-3	6-3	5-3	4-3	
10-4	9-4	8-4	7-4	6-4	5-4		
10-5	9-5	8-5	7-5	6-5			2-1
10-6	9-6	8-6	7-6				
10-7	9-7	8-7					
10-8	9-8						
10-9							

$6-2=4$ $4+2=6$	$6-4=2$ $2+4=6$
--------------------	--------------------

⑦ 1+0 2+0 3+0 4+0 5+0 ...

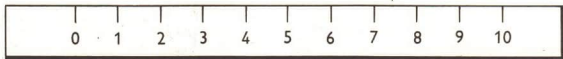
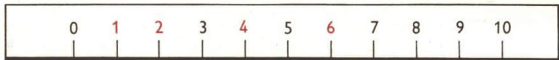
⑧ 1-0 2-0 3-0 4-0 5-0 ...

⑨ 1-1 2-2 3-3 4-4 5-5 ...

Wenn
-so

- $3+2$
- $3+4$
- $3+6$
- $3+1$

$3+a$



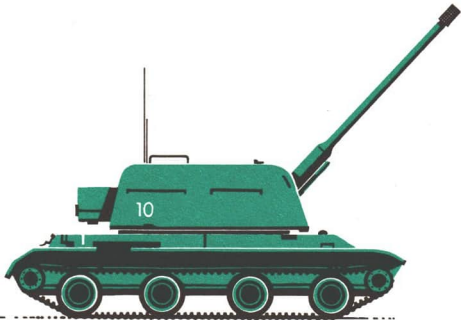
- $3+1$
- $3+4$
- $3+6$
- $3+2$

Wenn $a = 2$, so $3 + a = 5$
 Wenn $a = 5$, so $3 + a = 8$
 Wenn $a = 6$, so $3 + a = 9$

- | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|-------|--------|-------------|-------------|--------|-------|--------|-------|---|--------|-------------|--------|-------|--------|-------|--|--|--|----------|
| <p>①</p> <table border="0"> <tr> <td>$2+a;$</td> <td>$a=4$</td> <td style="border-left: 1px solid black; padding-left: 10px;">$3+a;$</td> <td>$a=1$</td> <td style="border-left: 1px solid black; padding-left: 10px;">③</td> <td>$2+a;$</td> <td>$a=0, 4, 5$</td> </tr> <tr> <td>$1+e;$</td> <td>$e=3$</td> <td style="border-left: 1px solid black; padding-left: 10px;">$5+e;$</td> <td>$e=2$</td> <td style="border-left: 1px solid black; padding-left: 10px;">④</td> <td>$3+a;$</td> <td>$a=1, 5, 6$</td> </tr> <tr> <td>$3+i;$</td> <td>$i=5$</td> <td style="border-left: 1px solid black; padding-left: 10px;">$2+i;$</td> <td>$i=4$</td> <td></td> <td></td> <td></td> </tr> </table> | $2+a;$ | $a=4$ | $3+a;$ | $a=1$ | ③ | $2+a;$ | $a=0, 4, 5$ | $1+e;$ | $e=3$ | $5+e;$ | $e=2$ | ④ | $3+a;$ | $a=1, 5, 6$ | $3+i;$ | $i=5$ | $2+i;$ | $i=4$ | | | | <p>②</p> |
| $2+a;$ | $a=4$ | $3+a;$ | $a=1$ | ③ | $2+a;$ | $a=0, 4, 5$ | | | | | | | | | | | | | | | | |
| $1+e;$ | $e=3$ | $5+e;$ | $e=2$ | ④ | $3+a;$ | $a=1, 5, 6$ | | | | | | | | | | | | | | | | |
| $3+i;$ | $i=5$ | $2+i;$ | $i=4$ | | | | | | | | | | | | | | | | | | | |



$a=0$	$a+2=2$
$a=1$	$a+2=3$
$a=2$	$a+2=4$
$a=3$	$a+2=5$



$a+2$

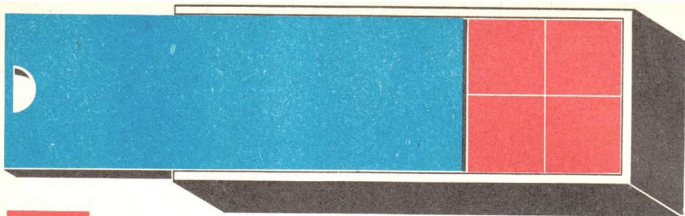
- ① $a+3$; $a=1, 5, 2$ ② $a+5$; $a=4, 3, 0$ ③ $a+1$; $a=0, 9, 5$

$a=2$	$7-a=5$
$a=3$	$7-a=4$
$a=4$	$7-a=3$
$a=5$	$7-a=2$

④ $9-a$; $a=3, 1, 4$
⑤ $6-a$; $a=6, 4, 2$
⑥ $10-a$; $a=5, 2, 0$

⑦ $a-5$; $a=7, 8, 10$
⑧ $a-3$; $a=4, 5, 9$
⑨ $a-1$; $a=1, 2, 3$

$a=8$	$a-4=4$
$a=10$	$a-4=6$
$a=9$	$a-4=5$
$a=7$	$a-4=3$



$$e+4$$

Wenn $e=5$, so $e+4=9$

Wenn $e=3$, so $e+4=7$

Wenn $e=6$, so $e+4=10$

Wenn $e=4$, so $e+4=8$

e	$e+4$
5	9
3	7
6	10
4	8

Wenn $i=8$, so $i-4=4$

Wenn $i=5$, so $i-4=1$

Wenn $i=6$, so $i-4=2$

Wenn $i=4$, so $i-4=0$

i	$i-4$
8	4
5	1
6	2
4	0

①

a	$4+a$
3	7
2	6
0	4
5	9
4	8

②

i	$2+i$
3	
4	
1	
0	
7	

③

e	$e+2$
8	
6	
2	
3	
5	

④

u	$8-u$
3	
2	
5	
4	
1	

⑤

a	$a-3$
8	5
2	-
3	0
1	-
5	2

⑥

a	$a-4$
6	
2	
3	
5	
4	

⑦

a	$a-2$
4	
0	
2	
1	
3	

⑧

a	$a-3$
4	
3	
2	
1	
0	



$$3 + a = 5$$

$$a = 2$$

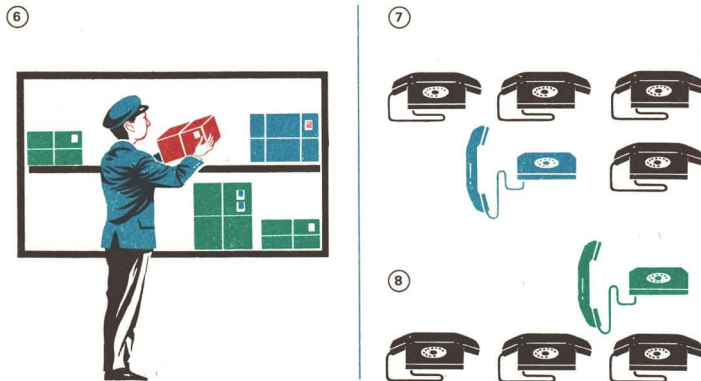
$$5 + a = 8$$

$$a = 3$$

$$4 - i = 3$$

$$i = 1$$

- | | | | | |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|
| ① | ② | ③ | ④ | ⑤ |
| $3 + i = 6$
$2 + e = 3$
$5 + a = 9$
$1 + i = 2$
$6 + e = 8$ | $7 - a = 5$
$10 - e = 8$
$4 - i = 1$
$5 - a = 0$
$8 - e = 8$ | $7 + e = 10$
$4 + a = 5$
$8 + e = 10$
$9 + e = 10$
$2 + i = 6$ | $9 - i = 4$
$6 - a = 2$
$10 - i = 3$
$7 - i = 2$
$8 - e = 5$ | $10 - e = 3$
$8 - a = 3$
$5 - i = 3$
$9 - e = 3$
$7 - a = 3$ |



①	$i+3=6$ $e+2=5$ $a+5=8$ $i+1=4$ $u+5=9$	②	$a-7=2$ $a-9=0$ $u-3=1$ $e-4=6$ $i-2=8$	③	$i+6=9$ $e+6=8$ $e+6=7$ $e+6=6$ $a+6=10$	④	$a-3=2$ $e-5=2$ $i-6=2$ $u-8=2$ $a-7=2$	⑤	$u+3=9$ $u-3=3$ $a+4=8$ $a-4=0$ $e-10=0$
---	-----------------------------------------------------	---	-----------------------------------------------------	---	------------------------------------------------------	---	-----------------------------------------------------	---	------------------------------------------------------

0	<	3
1	<	3
2	<	3
0	<	4
1	<	4
2	<	4
3	<	4

⑥	0 5	0 6	0 7	2 8
	1 5	1 6	1 7	3 8
	2 5	2 6	2 7	4 8
	3 5	3 6	3 7	5 8
	4 5	4 6	4 7	6 8
		5 6	5 7	7 8
			6 7	8 8

$3 < 7, 5 > 2$ sind Ungleichungen.

5	<	7	;	5	+	2	=	7
4	<	5	;	4	+	1	=	5
6	<	9	;	6	+	3	=	9

⑧	3 8	3 4	2 4	8 10
	4 7	2 6	1 6	7 10
	5 9	4 8	5 8	3 10

7	>	5	;	5	+	2	=	7
5	>	4	;	4	+	1	=	5
9	>	6	;	6	+	3	=	9

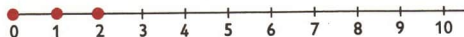
⑨	8 3	4 3	7 2	10 4
	7 4	8 2	9 8	10 2
	9 5	6 5	4 2	10 5

$$a < 3$$

Wenn $a=0$, so $a < 3$

Wenn $a=1$, so $a < 3$

Wenn $a=2$, so $a < 3$



$$a < 3$$
$$a = 0, 1, 2$$

$$4 > a$$
$$a = 0, 1, 2, 3$$

①

$$a < 2$$

$$e < 5$$

$$i < 3$$

②

$$e < 4$$

$$u < 6$$

$$a < 1$$

③

$$4 > e$$

$$3 > a$$

$$5 > u$$

④

$$2 > i$$

$$1 > e$$

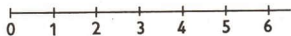
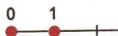
$$4 > u$$

$$3 + a < 5$$

Wenn $a=0$, so $3+a < 5$

Wenn $a=1$, so $3+a < 5$

Wenn $a=2$, so $3+a = 5$



$$3 + a < 5$$
$$a = 0, 1$$

$$3 + a < 7$$
$$a = 0, 1, 2, 3$$
$$7 - u > 3$$
$$u = 0, 1, 2, 3$$

⑤

$$2 + e < 5$$

$$5 + e < 7$$

$$3 + e < 6$$

$$1 + e < 5$$

$$0 + e < 3$$

⑥

$$8 - i > 4$$

$$7 - i > 5$$

$$5 - i > 2$$

$$5 - i > 1$$

$$3 - i > 0$$

⑦

$$9 - u > 7$$

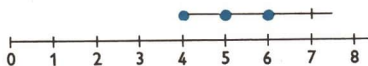
$$6 - u > 5$$

$$8 - u > 6$$

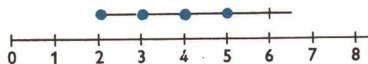
$$7 - u > 4$$

$$5 - u > 1$$

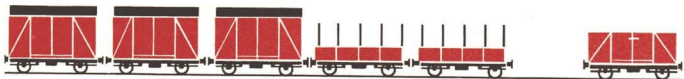
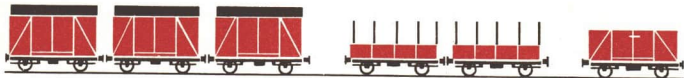
⑧



⑨



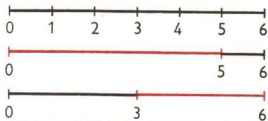
3 Summanden, 2 Subtrahenden



$$3+2+1=6$$

$$3+2+1=5+1$$

$$3+2+1=3+3$$

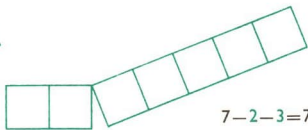
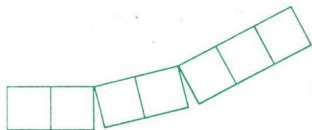


Summanden kann man beliebig zusammenfassen.

- | | | | |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|
| $\begin{array}{ c} 4+2+1 \\ 4+2+1 \end{array}$ | $\begin{array}{ c} 3+3+3 \\ 3+3+3 \end{array}$ | $\begin{array}{ c} ① \\ 2+4+2 \\ 2+4+2 \end{array}$ | $\begin{array}{ c} ② \\ 4+3+2 \\ 4+3+2 \end{array}$ |
| $\begin{array}{ c} ③ \\ 5+2+2 \\ 5+2+2 \end{array}$ | $\begin{array}{ c} ④ \\ 7+1+1 \\ 7+1+1 \end{array}$ | $\begin{array}{ c} ⑤ \\ 6+2+2 \\ 6+2+2 \end{array}$ | $\begin{array}{ c} ⑥ \\ 4+4+2 \\ 4+4+2 \end{array}$ |
| $\begin{array}{ c} ⑦ \\ 5+2+1 \\ 6+1+2 \\ 7+1+1 \\ 4+3+2 \end{array}$ | $\begin{array}{ c} ⑧ \\ 4+3+1 \\ 4+2+3 \\ 3+3+2 \\ 5+1+3 \end{array}$ | $\begin{array}{ c} ⑨ \\ 5+2+2 \\ 5+3+2 \\ 6+2+2 \\ 4+3+3 \end{array}$ | $\begin{array}{ c} ⑩ \\ 5+1+4 \\ 4+4+2 \\ 2+5+1 \\ 1+1+7 \end{array}$ |



$$5-2-1$$



$$7-2-3=7-5$$



②

10-5-2
10-7

③

10-5-4
10-9

④

8-4-2
8-6

⑤

9-3-1
9-4

⑥

7-2-1
9-3-3
6-2-2
5-1-2
8-2-1

⑦

6-3-1
7-2-2
8-1-2
8-3-2
10-5-5

⑧

7-4-2
8-3-3
6-1-2
10-3-4
5-3-2

⑨

10-3-3
9-3-4
8-4-4
7-3-1
4-2-1

①

$$\begin{array}{l} 2+5+1 \\ 1+3+3 \\ 2+1+5 \\ 3+2+3 \\ 6+0+2 \end{array}$$

$$\begin{array}{l} 2+6+1 \\ 1+2+7 \\ 2+3+5 \\ 4+0+1 \\ 4+1+4 \end{array}$$

②

$$\begin{array}{l} 3+4+1 \\ 1+1+8 \\ 0+4+3 \\ 1+4+2 \\ 1+3+2 \end{array}$$

$$\begin{array}{l} 3+3+3 \\ 2+4+3 \\ 2+5+2 \\ 1+2+0 \\ 5+2+1 \end{array}$$

③

$$\begin{array}{l} 6-0-4 \\ 9-2-3 \\ 7-2-2 \\ 5-4-1 \\ 8-5-2 \end{array}$$

$$\begin{array}{l} 6-2-2 \\ 7-4-1 \\ 5-1-3 \\ 10-7-2 \\ 6-0-3 \end{array}$$

④

$$\begin{array}{l} 8-4-4 \\ 7-3-3 \\ 8-2-4 \\ 10-4-5 \\ 4-3-1 \end{array}$$

$$\begin{array}{l} 5-3-2 \\ 9-3-5 \\ 8-6-1 \\ 10-5-4 \\ 7-3-3 \end{array}$$

⑤



⑥



⑦

$$\begin{array}{l} 8-6 \\ 9-5 \\ 10-7 \\ 7-5 \\ 6-4 \end{array}$$

$$\begin{array}{l} 9-7 \\ 5-4 \\ 8-5 \\ 7-4 \\ 6-5 \end{array}$$

⑧

$$\begin{array}{l} 4-3 \\ 10-9 \\ 9-8 \\ 5-3 \\ 3-2 \end{array}$$

⑨

$$\begin{array}{l} 8-7 \\ 9-4 \\ 10-8 \\ 7-6 \\ 9-9 \end{array}$$

$$\begin{array}{l} 8-8 \\ 9-6 \\ 7-7 \\ 10-6 \\ 8-4 \end{array}$$

4	+	3	=	7
7	-	2	=	5
6	-	3	=	3
8	+	2	=	10
3	+	6	=	9

⑩

$$\begin{array}{l} 7 \ 2 \ 5 \\ 6 \ 2 \ 8 \\ 9 \ 4 \ 5 \\ 3 \ 2 \ 1 \\ 3 \ 2 \ 5 \end{array}$$

$$\begin{array}{l} 9 \ 2 \ 7 \\ 1 \ 4 \ 5 \\ 6 \ 4 \ 2 \\ 6 \ 4 \ 10 \\ 3 \ 3 \ 0 \end{array}$$

$$\begin{array}{l} 4 \ 5 \ 9 \\ 4 \ 4 \ 8 \\ 4 \ 4 \ 0 \\ 7 \ 3 \ 4 \\ 7 \ 3 \ 10 \end{array}$$



7	<	9	;	7	+	2	=	9
4	>	2	;	2	+	2	=	4
4	<	8	;	4	+	4	=	8

④ $0 < 1$ $1 < 2$... $9 < 10$
 $10 > 9$ $9 > 8$... $1 > 0$

⑤

3	7	7	10	8	3	3	10
4	9	3	8	4	1	9	6
2	10	2	5	5	0	10	4

⑥

$3+x=7$	$5+x=8$	$7-x=2$	$10-x=4$
$4+x=9$	$7+x=10$	$9-x=6$	$4-x=0$
$2+x=4$	$6+x=8$	$8-x=3$	$8-x=6$
$1+x=3$	$3+x=6$	$6-x=5$	$10-x=2$
$8+x=10$	$2+x=9$	$3-x=1$	$7-x=5$

⑧

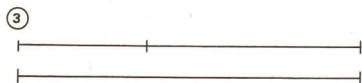
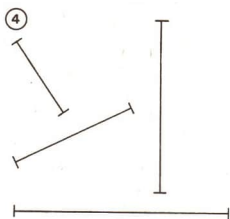
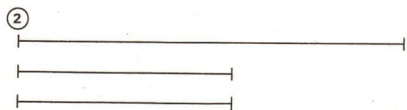
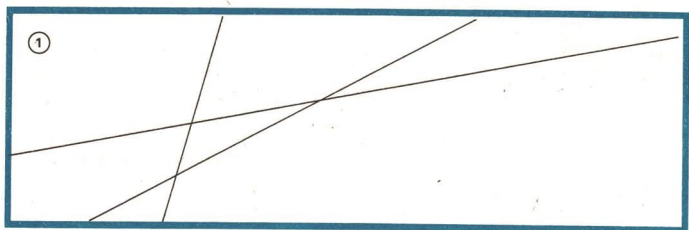
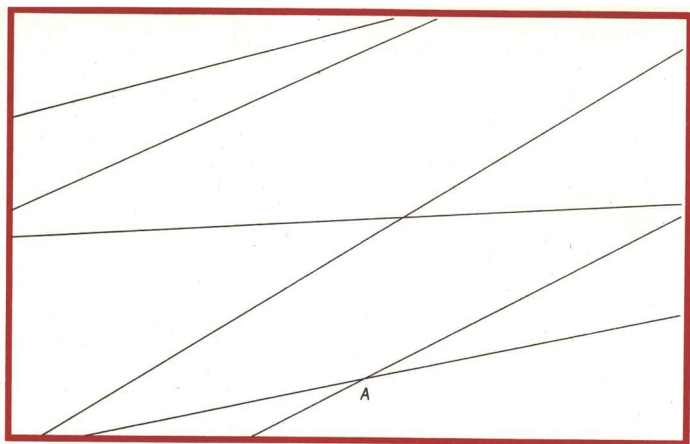
$4+a < 8$	$9-a > 6$
$2+a < 6$	$7-a > 3$
$5+a < 9$	$6-a > 2$
$5+a < 7$	$5-a > 2$
$7+a < 10$	$8-a > 5$

⑨

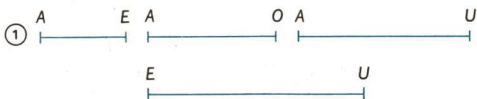
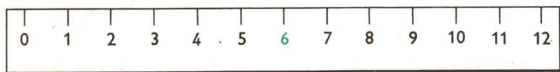
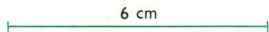
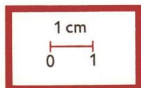
a	$4-a$
2	
5	
4	
3	

⑩

a	$a-4$
2	
5	
4	
3	



Das Zentimeter



10 cm

9 cm

② 8 cm

7 cm

6 cm

5 cm

4 cm

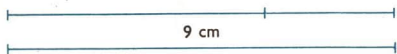
3 cm

2 cm

1 cm

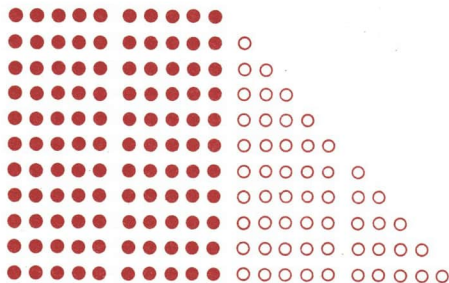
Eine Strecke von 10 cm ist länger als eine Strecke von 9 cm.

③



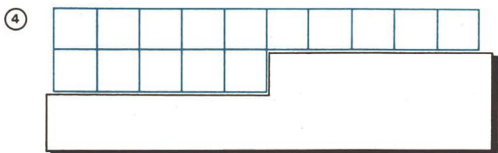
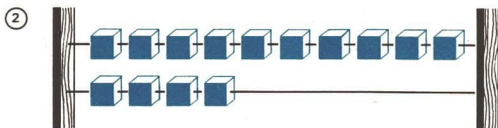
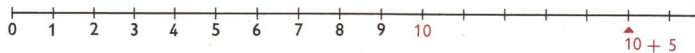
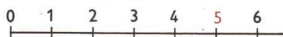
Die Zahlen von 0 bis 20

Die Zahlen von 11 bis 20



	$10 = 10 + 0$
	$11 = 10 + 1$
	$12 = 10 + 2$
	$13 = 10 + 3$

- ① 14
15
16
17
18
19
20



$10+a$ Wenn $a=1$, so $10+a=11$ Wenn $a=2$, so $10+a=12$ Wenn $a=3$, so $10+a=13$ ① $a=4, 5, 6, 7, 8, 9, 10, 0$ 

②

$10+1$	$10+2$	$10+3$	$10+4$	$10+5$
$10+6$	$10+7$	$10+8$	$10+9$	$10+10$

$10+6=16$

$18=10+8$

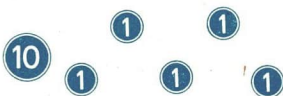
③	④	⑤	⑥	⑦		⑧	
$10+3$	$10+1$	13	14	a	$10+a$	a	$10+a$
$10+2$	$10+7$	15	11	5		8	
$10+8$	$10+4$	19	16	6		3	
$10+5$	$10+10$	12	17	0		7	
$10+6$	$10+9$	20	18	2		9	
				1		4	

13 cm





①



18



② 17 12 16 14 11 ③ 15 19 13 10 18

④ 15, 11, 6, 17, 3 ⑤ 14, 4, 10, 1, 0

⑥ 18, 8, 16, 6, 20 ⑦ 13, 3, 5, 9, 19

⑧ 11, 10, 9, 8, 7 ⑨ 8, 9, 10, 11, 12

10		
14		
7		
3		
20		

Die Ordnung der Zahlen von 0 bis 20

- ① $0 < 1$ $1 < 2$ $2 < 3$... $9 < 10$
 ② $10 < 11$ $11 < 12$ $12 < 13$... $19 < 20$

③

16				
16	<	17		

16, 12, 18, 19, 11
13, 17, 15, 14, 10

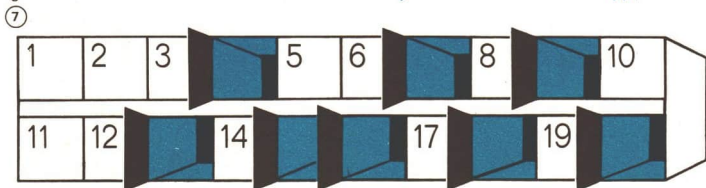
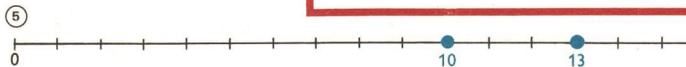
④

19				
19	>	18		

19, 11, 13, 14, 20
18, 16, 9, 10, 15



Zwischen 11 und 15 liegen 12, 13, 14.

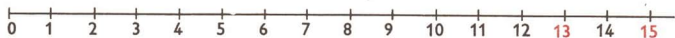
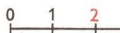
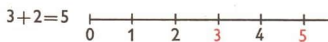
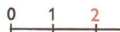


15	=	15
14	<	16
19	>	18

- ⑧ ⑨ ⑩ ⑪
- | | | | |
|-------|-------|-------|------|
| 12 13 | 14 16 | 17 11 | 16 6 |
| 13 17 | 18 15 | 12 8 | 18 9 |
| 11 11 | 19 17 | 9 13 | 3 12 |

Addition und Subtraktion bis 20

Addieren und Subtrahieren von 10 bis 20



$3+2=5$

$13+2=15$



$13+2=15$



$13+2=15$

4	+	2	=	6
14	+	2	=	16

①

$5+3$	$2+4$	$5+4$	$8+2$	$7+0$
$15+3$	$12+4$	$15+4$	$18+2$	$17+0$

②

$11+1$
$13+3$
$16+4$
$17+2$
$12+1$

③

$14+3$
$18+2$
$15+4$
$16+3$
$17+3$

④

$15+3$
$17+1$
$14+2$
$18+1$
$16+2$

⑤

$13+7$
$12+4$
$11+8$
$14+6$
$13+5$

⑥

$12+6$
$11+5$
$11+6$
$14+5$
$13+6$

⑦

$12+5$
$13+4$
$12+7$
$11+9$
$12+8$

⑧

$2+11$
$5+14$

⑨

$1+19$
$4+16$

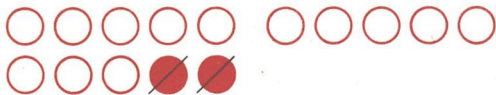
⑩

$3+12$
$2+18$

$2+13$
$3+15$

$3+17$
$5+10$

$0+12$
$0+20$



$5 - 2 = 3$

$15 - 2 = 13$

	6	-	2	=	4
	16	-	2	=	14

①

$8 - 3$
 $18 - 3$

$8 - 6$
 $18 - 6$

$9 - 4$
 $19 - 4$

$10 - 2$
 $20 - 2$

$7 - 0$
 $17 - 0$

②

③

④

⑤

⑥

⑦

$12 - 1$
 $16 - 3$
 $20 - 4$
 $19 - 2$
 $13 - 1$

$17 - 3$
 $20 - 2$
 $19 - 4$
 $19 - 3$
 $20 - 3$

$20 - 1$
 $18 - 1$
 $16 - 2$
 $19 - 1$
 $18 - 2$

$20 - 7$
 $16 - 4$
 $19 - 8$
 $20 - 6$
 $18 - 5$

$18 - 6$
 $16 - 5$
 $17 - 6$
 $19 - 5$
 $19 - 6$

$17 - 5$
 $17 - 4$
 $19 - 7$
 $20 - 9$
 $20 - 8$

⑧

⑨

⑩

⑪

⑫

⑬

$12 + 1$
 $13 + 3$
 $14 + 2$
 $17 + 3$
 $16 + 4$

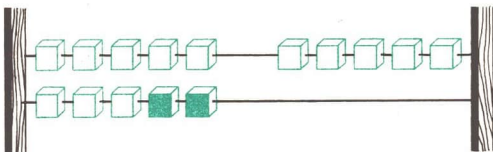
$11 + 7$
 $13 + 5$
 $12 + 6$
 $13 + 7$
 $14 + 5$

$11 + 1$
 $14 + 4$
 $15 + 5$
 $13 + 3$
 $12 + 2$

$18 - 3$
 $16 - 2$
 $20 - 3$
 $19 - 1$
 $20 - 2$

$19 - 6$
 $17 - 0$
 $17 - 3$
 $19 - 2$
 $19 - 7$

$20 - 1$
 $17 - 1$
 $14 - 2$
 $19 - 4$
 $19 - 5$



	15	-	2	=	13
	13	+	2	=	15

⑭

⑮

⑯

⑰

⑱

⑲

$16 - 3$
 $19 - 2$
 $15 - 5$

$17 - 2$
 $16 - 5$
 $19 - 7$

$18 - 4$
 $12 - 2$
 $18 - 5$

$17 - 3$
 $15 - 2$
 $19 - 4$

$18 - 3$
 $20 - 5$
 $13 - 3$

$20 - 2$
 $17 - 6$
 $14 - 4$

$12 < 17; \quad 12 + 5 = 17$

$18 > 15; \quad 15 + 3 = 18$

①	11 13	11 12	14 12	19 11	11 18	11 16
②	12 15	16 17	15 13	18 12	19 13	12 19
③	13 14	15 19	19 16	19 14	11 17	20 12
④	15 18	17 19	16 13	20 13	15 10	20 10

⑦	a	a-5	e	e-5	a	a-6	e	e-6	a	20-a
	8	3	18	13	6		16		2	
	10	5	20	15	7		17		8	
	7	2	17	12	8		18		6	
	9	4	19	14	9		19		0	
	6	1	16	11	10		20		10	
⑧										
⑨										



12	+	x	=	15
			x =	3

⑪	14+x=16	⑫	13+x=20	⑬	20-x=14
	17+x=20		12+x=17		18-x=10
	18+x=19		11+x=19		19-x=15
	15+x=18		14+x=19		17-x=12

⑭	12+x < 15	14+x < 17	⑮	15-x > 13	19-x > 15
	x = 0,12	11+x < 14		x = 0,1	16-x > 14
		15+x < 19			17-x > 13
		11+x < 12			18-x > 15
		10+x < 12			15-x > 11

4	+	x	=	10
		x	=	6

①	$8+x=10$	$2+x=10$	$3+x=10$	$6+x=10$
	$7+x=10$	$9+x=10$	$5+x=10$	$1+x=10$

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

②	$5=4+1$	③	$9=8+1$	④	$6=5+1$
	⋮		⋮		⋮
⑤	$4=3+1$	⑥	$3=2+1$	⑦	$8=7+1$
	⋮		⋮		⋮

8	=	3	+	x
x	=	5		

⑧	$4=1+x$	$7=3+x$	$5=4+x$	$6=4+x$
	$4=2+x$	$7=5+x$	$5=2+x$	$6=1+x$

⑨	⑩	⑪	⑫	⑬
$8=2+x$	$8=1+x$	$4=3+x$	$9=4+x$	$9=5+x$
$7=2+x$	$3=1+x$	$7=3+x$	$6=4+x$	$7=5+x$
$5=2+x$	$6=1+x$	$8=3+x$	$7=4+x$	$8=5+x$
$6=2+x$	$4=1+x$	$5=3+x$	$8=4+x$	$9=6+x$
$3=2+x$	$2=1+x$	$6=3+x$	$5=4+x$	$7=6+x$

12	-	x	=	10
		x	=	2

⑭	$15-x=10$	$17-x=10$	$14-x=10$	$16-x=10$
	$13-x=10$	$11-x=10$	$19-x=10$	$18-x=10$

⑮	⑯	⑰	⑱	⑳
$13-3$	$15-5$	$11-1$	$10-3$	$10-1$
$18-8$	$12-2$	$17-7$	$10-4$	$10-9$
$16-6$	$19-9$	$14-4$	$10-7$	$10-6$
				$10-2$
				$10-5$
				$10-8$

①

$$\begin{array}{|l} 6+4+2 \\ 8+2+3 \end{array}$$

②

$$\begin{array}{|l} 9+1+3 \\ 7+3+4 \end{array}$$

③

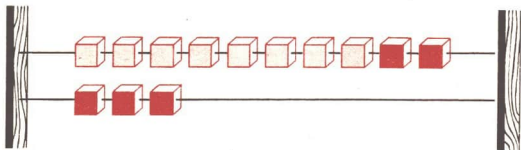
$$\begin{array}{|l} 8+2+2 \\ 5+5+3 \end{array}$$

④

$$\begin{array}{|l} 7+3+1 \\ 9+1+2 \end{array}$$

⑤

$$\begin{array}{|l} 8+2+1 \\ 9+1+1 \end{array}$$



$$\begin{aligned} 8+5 &= 8+2+3 \\ &= 10+3 \\ &= 13 \end{aligned}$$



$$8+3=8+2+1$$

$$8+3=11$$

⑥

$$\begin{array}{|l} 9+3 \\ 8+5 \\ 7+5 \end{array}$$

⑦

$$\begin{array}{|l} 9+6 \\ 8+4 \\ 9+5 \end{array}$$

⑧

$$\begin{array}{|l} 7+5 \\ 6+5 \\ 8+8 \end{array}$$

⑨

$$\begin{array}{|l} 8+6 \\ 9+7 \\ 7+6 \end{array}$$

⑩

$$\begin{array}{|l} 9+2 \\ 9+3 \\ 9+4 \end{array}$$

⑪

$$\begin{array}{|l} 8+3 \\ 8+4 \\ 8+5 \end{array}$$

⑫

$$\begin{array}{|l} 8+3=11 \\ 3+8=11 \end{array}$$

$$\begin{array}{|l} 9+2 \\ 2+9 \end{array}$$

$$\begin{array}{|l} 7+4 \\ 4+7 \end{array}$$

$$\begin{array}{|l} 8+4 \\ 4+8 \end{array}$$

$$\begin{array}{|l} 9+5 \\ 5+9 \end{array}$$

$$\begin{array}{|l} 8+6 \\ 6+8 \end{array}$$

⑬

$$4+8=12$$

$$5+8$$

$$4+9$$

$$5+6$$

$$6+9$$

$$5+7$$

⑭

$$7+9$$

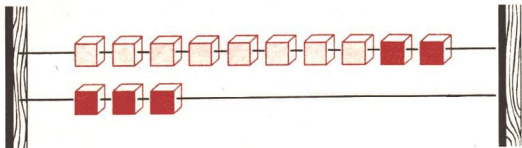
$$9+8$$

$$8+7$$

$$9+6$$

$$6+5$$

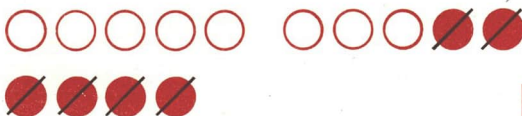
①	②	③	④	⑤
$12-2-2$	$13-3-1$	$11-1-2$	$12-2-3$	$15-5-2$
$11-1-1$	$12-2-1$	$13-3-2$	$14-4-1$	$13-3-3$



$$13-5=13-3-2$$

$$=10-2$$

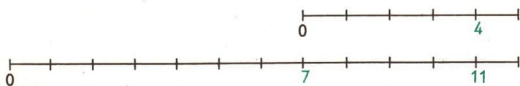
$$=8$$



$$14-6=14-4-2$$

1	4	-	6	=	8
---	---	---	---	---	---

⑥	⑦	⑧	⑨	⑩	⑪
$11-4$	$12-5$	$11-3$	$15-7$	$14-7$	$11-9$
$13-7$	$11-2$	$15-6$	$12-8$	$11-8$	$15-9$
$12-6$	$14-6$	$13-4$	$18-9$	$17-8$	$13-8$
$14-5$	$12-7$	$11-7$	$13-6$	$13-9$	$16-8$
$11-5$	$11-6$	$12-9$	$14-9$	$16-7$	$14-8$



1	1	-	4	=	7
7	+	4	=	11	

⑫	⑬	⑭	⑮	⑯	⑰
$11-4$	$11-3$	$11-2$	$12-3$	$13-4$	$14-5$
$13-5$	$14-5$	$11-3$	$12-4$	$13-5$	$14-6$
$12-3$	$12-4$	$11-4$	$12-5$	$13-6$	$14-7$

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



13	-	9	=	4	oder	13	-	9	=	4
		4	+	9		=	13			

- | | | | | | |
|------|------|------|------|------|------|
| ⑦ | ⑧ | ⑨ | ⑩ | ⑪ | ⑫ |
| 15-6 | 16-7 | 12-9 | 11-8 | 17-8 | 14-9 |
| 15-7 | 16-8 | 14-8 | 13-8 | 17-9 | 12-7 |
| 15-8 | 16-9 | 13-7 | 11-9 | 18-9 | 16-8 |

- | | | | | | | | |
|----|-----|---|-----|----|-----|----|-----|
| ⑬ | ⑭ | ⑮ | ⑯ | | | | |
| a | a+4 | e | e+5 | i | i-4 | u | u-6 |
| 7 | | 5 | | 10 | | 11 | |
| 8 | | 6 | | 11 | | 12 | |
| 9 | | 7 | | 12 | | 13 | |
| 10 | | 8 | | 13 | | 14 | |
| 11 | | 9 | | 14 | | 15 | |



Übung und Wiederholung

+	0	1	2	3
0				
1				
2				
3				
4				
5				8

$5+3=8$

+	0	1	2	3	4	5
0						
1						
2						
3						8

$3+5=8$

$7+6=13$

+	0	1	2	3	4	5	6	7	8	9	10
0	0	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10	11
2	2	3	4	5	6	7	8	9	10	11	12
3	3	4	5	6	7	8	9	10	11	12	13
4	4	5	6	7	8	9	10	11	12	13	14
5	5	6	7	8	9	10	11	12	13	14	15
6	6	7	8	9	10	11	12	13	14	15	16
7	7	8	9	10	11	12	13	14	15	16	17
8	8	9	10	11	12	13	14	15	16	17	18
9	9	10	11	12	13	14	15	16	17	18	19
10	10	11	12	13	14	15	16	17	18	19	20

①

$$\begin{array}{l} 8+2 \\ 4+3 \\ 2+6 \end{array}$$

②

$$\begin{array}{l} 4+4 \\ 0+3 \\ 6+3 \end{array}$$

③

$$\begin{array}{l} 8+5 \\ 9+4 \\ 10+8 \end{array}$$

④

$$\begin{array}{l} 3+8 \\ 6+9 \\ 9+10 \end{array}$$

①

$0+1$	$0+2$	$0+3$	$0+4$	$0+5$	$0+6$	$0+7$
$1+1$	$1+2$	$1+3$	$1+4$	$1+5$	$1+6$	$1+7$
$2+1$	$2+2$	$2+3$	$2+4$	$2+5$	$2+6$	$2+7$
\vdots	\vdots	\vdots	\vdots	\vdots	$3+6$	$3+7$
$9+1$	$8+2$	$7+3$	$6+4$	$5+5$	$4+6$	

②

$10-0$	$9-0$	$8-0$	$7-0$	$6-0$	$5-0$	$4-0$
$10-1$	$9-1$	$8-1$	$7-1$	$6-1$	$5-1$	$4-1$
$10-2$	$9-2$	$8-2$	$7-2$	$6-2$	$5-2$	$4-2$
\vdots	\vdots	\vdots	\vdots	\vdots	\vdots	$4-3$
$10-10$	$9-9$	$8-8$	$7-7$	$6-6$	$5-5$	$4-4$

③

$4+3$

④

$0+8$

⑤

$8-3$

⑥

$9-6$

⑦

$5+4$

⑧

$6+0$

$4+0$

$6+3$

$9-0$

$8-8$

$4-0$

$7-6$

$6+2$

$2+8$

$9-5$

$4-4$

$2+2$

$3+5$

⑨ $a+7$
 $a=0, 1, 2, 3$

⑩ $a+8$
 $a=0, 1, 2$

⑪ $a+9$
 $a=0, 1$

⑫ $3-e$
 $e=0, 1, 2, 3$

⑬ $2-e$
 $e=0, 1, 2$

⑭ $1-u$
 $u=0, 1$

⑮



⑮

9 Kinder rodeln. 4 Kinder davon gehen heim.
Wieviel Kinder rodeln nun?

⑮

6 Kinder sind auf dem Eis. Nun kommen 3 Kinder auf das Eis.
Wieviel Kinder sind auf dem Eis?

①

$$\begin{array}{l} 11+1 \\ 12+1 \\ 13+1 \\ \vdots \\ 18+1 \\ 19+1 \end{array}$$

$$\begin{array}{l} 11+2 \\ 12+2 \\ 13+2 \\ \vdots \\ 18+2 \end{array}$$

$$\begin{array}{l} \dots \\ \dots \\ \dots \end{array}$$

$$\begin{array}{l} 11+7 \\ 12+7 \\ 13+7 \end{array}$$

$$\begin{array}{l} 11+8 \\ 12+8 \end{array}$$

$$11+9$$

$$14+2=16$$

$$17-3=14$$

②

$$\begin{array}{l} 11+4 \\ 13+5 \\ 12+4 \\ 11+7 \\ 12+5 \end{array}$$

③

$$\begin{array}{l} 13+6 \\ 11+8 \\ 14+4 \\ 17+3 \\ 18+2 \end{array}$$

④

$$\begin{array}{l} 14+5 \\ 15+4 \\ 12+6 \\ 13+2 \\ 14+3 \end{array}$$

⑤

$$\begin{array}{l} 13-2 \\ 15-3 \\ 18-1 \\ 17-6 \\ 16-5 \end{array}$$

⑥

$$\begin{array}{l} 14-2 \\ 17-4 \\ 19-5 \\ 15-2 \\ 18-4 \end{array}$$

⑦

$$\begin{array}{l} 17-3 \\ 19-7 \\ 16-4 \\ 14-4 \\ 18-5 \end{array}$$

⑧



⑨ 11 Pioniere sammeln Flaschen. 4 andere Pioniere sammeln Papier.
Wieviel Pioniere sammeln?

⑩ Uwe sammelte 14 Flaschen. Ines sammelte 3 Flaschen mehr.
Wieviel Flaschen sammelte Ines?

⑪ Gert sammelte 18 Flaschen. Helga sammelte 2 Flaschen weniger.
Wieviel Flaschen sammelte Helga?

①	②	③	④	⑤
$8+2+4$	$14-4-3$	$6+4+4$	$18-8-1$	$12-2-6$
$9+1+3$	$12-2-5$	$7+3+4$	$16-6-3$	$13-3-5$
$7+3+5$	$13-3-4$	$9+1+2$	$13-3-5$	$15-5-4$

⑥							
$9+2$	$8+3$	$7+4$	$6+5$	$5+6$	$4+7$	$3+8$	
$9+3$	$8+4$	$7+5$	$6+6$	$5+7$	$4+8$	$3+9$	
$9+4$	$8+5$	$7+6$	$6+7$	$5+8$	$4+9$		
\vdots	\vdots	\vdots	$6+8$	$5+9$			$2+9$
$9+9$	$8+9$	$7+9$	$6+9$				

⑦							
$11-2$	$12-3$	$13-4$	$14-5$	$15-6$	$16-7$	$17-8$	
$11-3$	$12-4$	$13-5$	$14-6$	$15-7$	$16-8$	$17-9$	
$11-4$	$12-5$	$13-6$	$14-7$	$15-8$	$16-9$		
\vdots	\vdots	\vdots	$14-8$	$15-9$			$18-9$
$11-9$	$12-9$	$13-9$	$14-9$				

⑧	⑨	⑩	⑪	⑫	⑬
$9+3$	$7+5$	$12-3$	$13-6$	$9+7$	$11-7$
$8-7$	$8+3$	$11-4$	$14-5$	$12-8$	$8+6$
$7+6$	$9+5$	$13+5$	$12-5$	$7+8$	$18-9$
$9+4$	$7+7$	$12-4$	$11-3$	$14-6$	$4+9$
$8+8$	$6+5$	$16-6$	$16-7$	$9+2$	$12-5$



⑮ 7 Jungen und 8 Mädchen rodeln.
Wieviel Kinder rodeln?

⑯ 14 Kinder rodeln. 7 von ihnen haben keinen Schlitten mit.
Wieviel Schlitten sind da?

①	②	③	④	⑤	⑥
3+8	3+14	11-5	13-4	18-4	15-4
5+7	2+12	13-6	12-5	16-2	17-3
4+9	4+11	15-7	11-4	15-3	13-1
5+6	5+12	14-6	14-5	17-3	14-3
5+9	1+17	16-8	11-2	14-2	16-4

Wenn $i=3$, so $8+i=11$.

Wenn $a=3$, so $12-a=9$.

⑦	i	$8+i$	⑧	a	$14+a$	⑨	a	$12-a$	⑩	e	$13-e$
	3			2			3			4	
	4			4			5			8	
	5			6			7			7	
	6			3			9			6	
	7			5			2			2	

Wenn $a=5$ und $e=3$, so $a+e=8$.

Wenn $a=8$ und $e=7$, so $a+e=15$.

⑪	a	e	$a+e$	⑫	e	i	$e+i$	⑬	a	u	$a+u$	u	i	$u+i$
	5	3	8		3	6			8	5			8	7
	8	7	15		14	3			12	4			6	5
	6	4	10		8	9			0	10			3	1
	10	5	15		7	4			16	3			15	4
	14	2	16		4	2			5	11			12	8

Wenn $e=8$ und $i=2$, so $e-i=6$.

Wenn $e=7$ und $i=0$, so $e-i=7$.

⑭	e	i	$e-i$	⑮	a	i	$a-i$	⑯	i	u	$i-u$	a	e	$a-e$
	8	2	6		13	2			14	5			12	6
	7	0	7		4	2			8	4			11	3
	10	4	6		8	5			6	6			9	4
	13	2	11		18	2			11	4			4	9
	13	3	10		5	9			18	9			16	3

5	+	x	=	9
		x	=	4

①

$$\begin{aligned} 3+x &= 5 \\ 8+x &= 10 \\ 4+x &= 7 \\ 6+x &= 9 \\ 2+x &= 8 \end{aligned}$$

②

$$\begin{aligned} 14+x &= 16 \\ 18+a &= 20 \\ 13+x &= 19 \\ 11+i &= 18 \\ 12+x &= 20 \end{aligned}$$

③

$$\begin{aligned} 8+x &= 13 \\ 6+e &= 12 \\ 9+i &= 15 \\ 8+u &= 16 \\ 7+a &= 12 \end{aligned}$$

④

$$\begin{aligned} x+8 &= 12 \\ x+7 &= 15 \\ x+9 &= 13 \\ x+5 &= 14 \\ x+8 &= 16 \end{aligned}$$

⑤

$$\begin{aligned} 8-x &= 4 \\ 9-x &= 7 \\ 7-x &= 3 \\ 6-x &= 5 \\ 9-x &= 4 \end{aligned}$$

⑥

$$\begin{aligned} 18-x &= 15 \\ 16-x &= 14 \\ 20-x &= 15 \\ 18-x &= 17 \\ 19-x &= 12 \end{aligned}$$

⑦

$$\begin{aligned} 12-x &= 8 \\ 13-x &= 7 \\ 14-x &= 9 \\ 16-x &= 9 \\ 11-x &= 6 \end{aligned}$$

⑧

$$\begin{aligned} x-3 &= 9 \\ x-5 &= 8 \\ x-5 &= 9 \\ x-8 &= 9 \\ x-5 &= 9 \end{aligned}$$

⑩

3	7
8	4
3	9
7	2
5	9

⑪

7	12
9	14
11	8
15	6
7	16

⑫

17	14
13	18
12	14
15	19
20	16

⑨

8	<	11	;	8	+	3	=	11
12	>	7	;	7	+	5	=	12
9		13						
8		12						
14		9						

⑬

$$\begin{aligned} a < 4 \\ a < 3 \\ a < 2 \\ 3 > a \\ 4 > a \end{aligned}$$

⑭

$$\begin{aligned} 2+a < 5 \\ 9+a < 11 \\ 8+a < 12 \\ 7+a < 11 \\ 9+a < 13 \end{aligned}$$

⑮

$$\begin{aligned} 8-a > 5 \\ 9-a > 7 \\ 12-a > 8 \\ 13-a > 9 \\ 11-a > 9 \end{aligned}$$

8	-	a	>	4
		a	=	0, 1, 2, 3

⑯

$$\begin{aligned} 6-e > 2 \\ 8-e > 6 \\ 14-e > 11 \\ 15-e > 11 \\ 12-e > 9 \end{aligned}$$

⑰

$$\begin{aligned} 10-u > 6 \\ 10-u > 9 \\ 11-u > 7 \\ 13-u > 11 \\ 16-u > 12 \end{aligned}$$

⑱

$$\begin{aligned} 3+i < 6 \\ 6-i > 4 \\ 13+i < 17 \\ 15-i > 11 \\ 9+i < 10 \end{aligned}$$

⑲

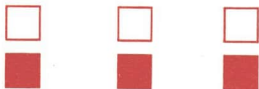
$$\begin{aligned} 12-a > 9 \\ 8+e < 11 \\ 13-u > 9 \\ 9+i < 13 \\ 11-a > 8 \end{aligned}$$

Multiplizieren



$$2+2+2=6$$

$$3+3=6$$



$$3 \cdot 2=6$$

$$2 \cdot 3=6$$

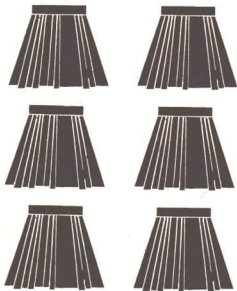
• Das ist das Zeichen für „mal“.
In der Gleichung $3 \cdot 2=6$ sind 3 und 2 die Faktoren.



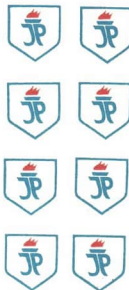
$$4 \cdot 2=8$$

$$2 \cdot 4=8$$

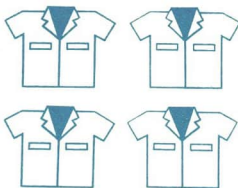
①

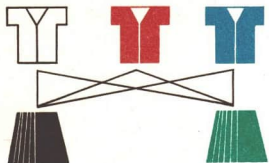


②



③





$$2 \cdot 3 = 6$$

$$3 \cdot 2 = 6$$



	<i>Lisa</i>	<i>Nina</i>
<i>Hans</i>	<i>Lisa Hans</i>	<i>Nina Hans</i>
<i>Uli</i>	<i>Lisa Uli</i>	<i>Nina Uli</i>

$$2 \cdot 2 = 4$$



$$3 \cdot 2 = 2 \cdot 3 \\ = 6$$

Faktoren kann man vertauschen.



$$5 \cdot 2 = 2 \cdot 5 \\ = 10$$

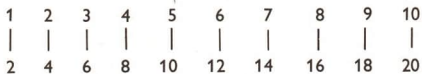
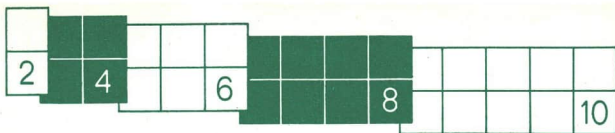


$$4 \cdot 2 = 2 \cdot 4 \\ = 8$$

⑦	$1 \cdot 2$	$2 \cdot 2$	$3 \cdot 2$
⑧	$5 \cdot 2$	$6 \cdot 2$	$7 \cdot 2$
⑨	$8 \cdot 2$	$9 \cdot 2$	$10 \cdot 2$

$$3 + 3 = 2 \cdot 3 \\ = 6$$

⑩	⑪	⑫	
$5 + 5$	$7 + 7$	$9 + 9$	
$6 + 6$	$8 + 8$	$10 + 10$	

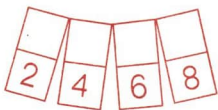
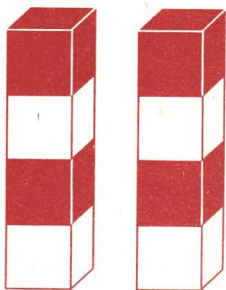


$1 \cdot 2 = 2$	$6 \cdot 2 = 12$
$2 \cdot 2 = 4$	$7 \cdot 2 = 14$
$3 \cdot 2 = 6$	$8 \cdot 2 = 16$
$4 \cdot 2 = 8$	$9 \cdot 2 = 18$
$5 \cdot 2 = 10$	$10 \cdot 2 = 20$

①	<table border="1"> <tr><th>a</th><th>$a+a$</th></tr> <tr><td>1</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>8</td><td></td></tr> <tr><td>10</td><td></td></tr> <tr><td>5</td><td></td></tr> </table>	a	$a+a$	1		3		8		10		5		②	<table border="1"> <tr><th>a</th><th>$a \cdot 2$</th></tr> <tr><td>1</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>8</td><td></td></tr> <tr><td>10</td><td></td></tr> <tr><td>5</td><td></td></tr> </table>	a	$a \cdot 2$	1		3		8		10		5		③	<table border="1"> <tr><th>e</th><th>$e+e$</th></tr> <tr><td>4</td><td></td></tr> <tr><td>7</td><td></td></tr> <tr><td>9</td><td></td></tr> <tr><td>6</td><td></td></tr> <tr><td>2</td><td></td></tr> </table>	e	$e+e$	4		7		9		6		2		④	<table border="1"> <tr><th>e</th><th>$e \cdot 2$</th></tr> <tr><td>4</td><td></td></tr> <tr><td>7</td><td></td></tr> <tr><td>9</td><td></td></tr> <tr><td>6</td><td></td></tr> <tr><td>2</td><td></td></tr> </table>	e	$e \cdot 2$	4		7		9		6		2	
a	$a+a$																																																						
1																																																							
3																																																							
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a	$a \cdot 2$																																																						
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e	$e+e$																																																						
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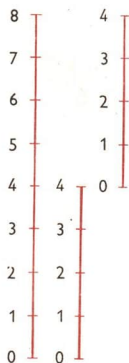
⑤	<table border="1"> <tr><td>$20 = 10 + 10$</td></tr> <tr><td>$18 = 9 + 9$</td></tr> <tr><td>\vdots</td></tr> <tr><td>$2 = 1 + 1$</td></tr> </table>	$20 = 10 + 10$	$18 = 9 + 9$	\vdots	$2 = 1 + 1$	⑥	<table border="1"> <tr><td>$20 = 2 \cdot 10$</td></tr> <tr><td>$18 = 2 \cdot 9$</td></tr> <tr><td>\vdots</td></tr> <tr><td>$2 = 2 \cdot 1$</td></tr> </table>	$20 = 2 \cdot 10$	$18 = 2 \cdot 9$	\vdots	$2 = 2 \cdot 1$	⑦	<table border="1"> <tr><td>$20 = 10 \cdot 2$</td></tr> <tr><td>$18 = 9 \cdot 2$</td></tr> <tr><td>\vdots</td></tr> <tr><td>$2 = 1 \cdot 2$</td></tr> </table>	$20 = 10 \cdot 2$	$18 = 9 \cdot 2$	\vdots	$2 = 1 \cdot 2$	⑧	<table border="1"> <tr><td>$0 + 2 = 2$</td></tr> <tr><td>$2 + 2 = 4$</td></tr> <tr><td>\vdots</td></tr> <tr><td>$18 + 2 = 20$</td></tr> </table>	$0 + 2 = 2$	$2 + 2 = 4$	\vdots	$18 + 2 = 20$	⑨	<table border="1"> <tr><td>$20 - 2 = 18$</td></tr> <tr><td>$18 - 2 = 16$</td></tr> <tr><td>\vdots</td></tr> <tr><td>$2 - 2 = 0$</td></tr> </table>	$20 - 2 = 18$	$18 - 2 = 16$	\vdots	$2 - 2 = 0$
$20 = 10 + 10$																													
$18 = 9 + 9$																													
\vdots																													
$2 = 1 + 1$																													
$20 = 2 \cdot 10$																													
$18 = 2 \cdot 9$																													
\vdots																													
$2 = 2 \cdot 1$																													
$20 = 10 \cdot 2$																													
$18 = 9 \cdot 2$																													
\vdots																													
$2 = 1 \cdot 2$																													
$0 + 2 = 2$																													
$2 + 2 = 4$																													
\vdots																													
$18 + 2 = 20$																													
$20 - 2 = 18$																													
$18 - 2 = 16$																													
\vdots																													
$2 - 2 = 0$																													

Dividieren

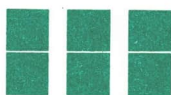
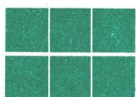
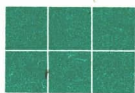


$$8 : 2 = 4$$

$$4 \cdot 2 = 8$$



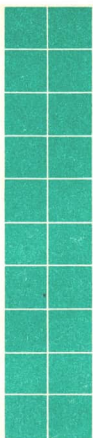
: Das ist das Zeichen für „geteilt durch“.



$6 : 2 = 3$

$3 \cdot 2 = 6$





①



②



③



④



$$20 : 2 = 10$$

$$10 \cdot 2 = 20$$

⑤



⑥



⑦



$$4 : 2 = 2$$

$$2 \cdot 2 = 4$$

$$2 : 2 = 1$$

$$1 \cdot 2 = 2$$



12	:	2	=	6
6	·	2	=	12

⑧

20 : 2
14 : 2
8 : 2

⑨

6 : 2
10 : 2
18 : 2

⑩

16 : 2
4 : 2
2 : 2

⑪

a	a : 2
16	
14	
10	
18	
4	

⑫

e	e : 2
20	
12	
6	
8	
2	

•	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6								
4	4	8								
5	5	10								
6	6	12								
7	7	14								
8	8	16								
9	9	18								
10	10	20								

$$5 \cdot 3 = 15$$

$$3 \cdot 5 = 15$$

•	1	2	3	6	7
1					
2					
3					
4					
5			15		
8					
9					
10					

Löse durch Abdecken!

①	②	③	④	⑤	⑥	⑦
1 · 2	6 · 2	1 · 3	1 · 4	1 · 5	1 · 6	1 · 8
2 · 2	7 · 2	2 · 3	2 · 4	2 · 5	2 · 6	2 · 8
3 · 2	8 · 2	3 · 3	3 · 4	3 · 5	3 · 6	1 · 9
4 · 2	9 · 2	4 · 3	4 · 4	4 · 5	1 · 7	2 · 9
5 · 2	10 · 2	6 · 3	5 · 4	1 · 10	2 · 7	2 · 10

$6+6+6=3 \cdot 6$
$= 18$

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

·	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18				
4	4	8	12	16	20					
5	5	10	15	20						
6	6	12	18							
7	7	14								
8	8	16								
9	9	18								
10	10	20								

- ① $2 \cdot 2$ $3 \cdot 2$ $4 \cdot 2$ $5 \cdot 2$ $6 \cdot 2$ $7 \cdot 2$ $8 \cdot 2$ $9 \cdot 2$ $10 \cdot 2$
 $3 \cdot 3$ $4 \cdot 3$ $5 \cdot 3$ $6 \cdot 3$
 $4 \cdot 4$ $5 \cdot 4$

- ② $3 \cdot 2$ | $4 \cdot 2$ | $5 \cdot 2$ | $6 \cdot 2$ | $7 \cdot 2$ | $8 \cdot 2$ | $9 \cdot 2$ | $10 \cdot 2$
 $2 \cdot 3$ | $2 \cdot 4$ | $2 \cdot 5$ | $2 \cdot 6$ | $2 \cdot 7$ | $2 \cdot 8$ | $2 \cdot 9$ | $2 \cdot 10$

- ③ $4 \cdot 3$ | $5 \cdot 3$ | $6 \cdot 3$ | $5 \cdot 4$ | ④ $2 \cdot 2$ | $4 \cdot 4$
 $3 \cdot 4$ | $3 \cdot 5$ | $3 \cdot 6$ | $4 \cdot 5$ | $3 \cdot 3$ |

$10 : 2 = 5$
$5 \cdot 2 = 10$

oder

$10 : 2 = 5$
$2 \cdot 5 = 10$

⑤

⑥

$16 : 2$	$6 : 2$
$12 : 2$	$10 : 2$
$8 : 2$	$18 : 2$
$20 : 2$	$14 : 2$
$4 : 2$	$2 : 2$

①

a	$a \cdot 2$
3	
6	
2	
5	
8	

②

e	$2 \cdot e$
4	
1	
10	
7	
9	

③

$2 \cdot a$	a
18	
14	
2	
8	
20	

④

$2 \cdot e$	e
10	
4	
16	
6	
12	

⑤

i	$i : 2$
12	
8	
20	
4	
6	

⑥

u	$u : 2$
2	
10	
14	
18	
16	

⑦

a	$a \cdot 2$	$2 \cdot a$
3		
5		
9		
7		
6		

⑧



- ⑨ Ein Auto fährt zweimal zum Bahnhof und holt jedesmal 5 Kisten. Wieviel Kisten holt das Auto?
- ⑩ 2 Lastwagen kommen ins Werk. Auf jedem Wagen stehen 2 Maschinen. Wieviel Maschinen erhält das Werk?
- ⑪ Ein Omnibus hält viermal. Jedesmal steigen 2 Arbeiter ein. Wieviel Arbeiter sind eingestiegen?
- ⑫ In einem Omnibus fahren 18 Arbeiter. Im nächsten Omnibus fahren 2 Arbeiter mehr. Wieviel Arbeiter fahren in diesem Omnibus?

①	a	e	a · e
2	4		
6	2		
2	3		
7	2		
2	7		

②	e	i	e · i
4	2		
2	8		
8	2		
5	2		
2	9		

③	e	u	e · u
3	2		
10	2		
2	5		
2	6		
1	2		

④	a	e	a · e	e · a
2	6			
2	1			
5	2			
2	9			
7	2			

⑤	i	u	i · u	u · i
2	7			
10	2			
2	5			
8	2			
3	2			

- ⑥ In der Werkhalle arbeiten 8 Arbeiter. Jeder bedient 2 Maschinen.
An wieviel Maschinen wird gearbeitet?
- ⑦ In einem Saal stehen 10 Maschinen.
In einem anderen Saal stehen doppelt soviel Maschinen.
Wieviel Maschinen stehen im zweiten Saal?
- ⑧ 16 Kisten werden gleichmäßig auf zwei Wagen verteilt.
Wieviel Kisten kommen auf jeden Wagen?
- ⑨ Von 18 Maschinen werden in der Nacht nur die Hälfte bedient.
An wieviel Maschinen wird gearbeitet?

Bilde Gleichungen!

⑩
6 - 2 = 4
6 · 2 = 12
6 : 2 = 3
6 + 2 = 8

⑩
10 2 5
10 2 8
10 2 20
10 2 12

⑪	⑫
8 2 6	12 6 6
8 2 4	12 2 6
8 2 16	12 2 10
8 2 10	12 6 18

- ① Ein Heft kostet 8 Pf.
Wieviel Pfennig kosten 2 Hefte?
- ② Horst kauft 6 Hefte. Uta kauft doppelt soviel Hefte.
Wieviel Hefte kauft Uta?
- ③ In einem Kasten sind 12 Buntstifte.
In einem anderen Kasten sind nur halb soviel Stifte.
Wieviel Stifte sind in diesem Kasten?
- ④ Bernd hat 5 Murmeln. Udo hat ebenso viele Murmeln.
Wieviel Murmeln haben beide Jungen zusammen?

⑤	$2 \cdot x = 4$	⑥	$2 \cdot x = 18$	⑦	$x \cdot 2 = 16$	⑧	$x \cdot 2 = 6$
	$2 \cdot x = 8$		$2 \cdot x = 20$		$x \cdot 2 = 12$		$x \cdot 2 = 14$
	$2 \cdot x = 10$		$2 \cdot x = 2$		$x \cdot 2 = 4$		$x \cdot 2 = 8$
	$2 \cdot x = 12$		$2 \cdot x = 6$		$x \cdot 2 = 2$		$x \cdot 2 = 18$
	$2 \cdot x = 16$		$2 \cdot x = 14$		$x \cdot 2 = 20$		$x \cdot 2 = 10$



- ⑩ Auf einem Feld arbeiten 2 Brigaden mit je 8 Bauern.
Wieviel Bauern arbeiten auf dem Feld?
- ⑪ Auf einem Feld arbeiten 5 Traktoren.
Nun fährt ein Traktor weg. Wieviel Traktoren bleiben auf dem Feld?
- ⑫ 3 Kälber und 5 Schweine werden verkauft.
Wieviel Tiere werden verkauft?
- ⑬ 8 Tiere wurden verkauft. Ein Auto holt aber nur 4 Tiere.
Wieviel Tiere muß das Auto noch holen?

Die Zahlen von 0 bis 100

Die Zehner von 0 bis 100



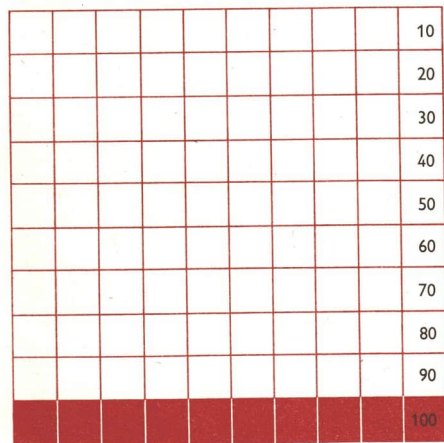
10



$$10 + 10 = 20$$

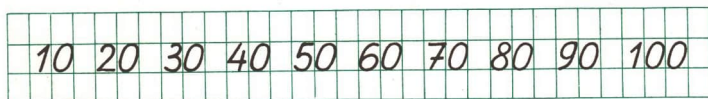
$$2 \cdot 10 = 20$$

⋮



$$90 + 10 = 100$$

$$10 \cdot 10 = 100$$





$1 \cdot 10 = 10$



$2 \cdot 10 = 20$



$3 \cdot 10 = 30$



$4 \cdot 10 = 40$



①



②



③



④



⑤



$10 \cdot 10 = 100$

100 Pf = 1 M M heißt Mark der
Deutschen Demokratischen Republik.



$$20 + 30 = 50$$

$$20 + 30 = 50;$$

denn $2 + 3 = 5$

①	②	③	④	⑤
$20 + 20$	$10 + 10$	$50 + 10$	$30 + 30$	$20 + 70$
$40 + 20$	$20 + 10$	$60 + 10$	$60 + 30$	$10 + 80$
$60 + 20$	$30 + 10$	$70 + 10$	$10 + 30$	$10 + 50$
$80 + 20$	$40 + 10$	$80 + 10$	$40 + 30$	$30 + 50$

⑥

$$70 < 90, 70 + 20 = 90$$
$$80 > 50, 50 + 30 = 80$$

20	40	80	70	50	100
30	60	40	60	100	80
60	50	20	70	60	100

$$50 - 20 = 30$$

$$50 - 20 = 30;$$

denn $5 - 2 = 3$

⑦	⑧	⑨	⑩	⑪
$100 - 20$	$100 - 10$	$50 - 10$	$90 - 30$	$90 - 80$
$80 - 20$	$90 - 10$	$40 - 10$	$60 - 30$	$80 - 60$
$60 - 20$	$80 - 10$	$30 - 10$	$30 - 30$	$100 - 70$
$40 - 20$	$70 - 10$	$20 - 10$	$70 - 30$	$50 - 40$
$20 - 20$	$60 - 10$	$10 - 10$	$40 - 30$	$70 - 50$

⑫	a	$a + 30$	⑬	i	$i + 40$	⑭	u	$u - 20$	⑮	u	$u - 50$
	30			40			70			50	
	50			20			40			60	
	70			60			90			70	
	60			30			50			80	
	20			10			30			90	

⑯	⑰	⑱	⑲
$20 + x = 30$	$x + 30 = 70$	$80 - x = 50$	$x - 20 = 80$
$40 + x = 40$	$x + 40 = 80$	$70 - x = 60$	$x - 40 = 50$
$50 + x = 100$	$x + 50 = 60$	$90 - x = 40$	$x - 30 = 0$
$60 + x = 80$	$x + 20 = 90$	$100 - x = 20$	$x - 50 = 10$
$70 + x = 90$	$x + 10 = 100$	$60 - x = 0$	$x - 0 = 20$

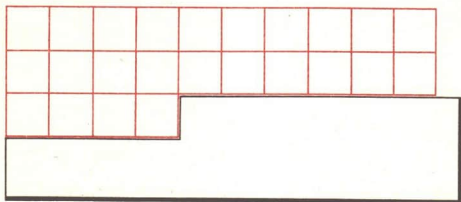
$$100 \text{ cm} = 1 \text{ m}$$

- ① Wiederhole Seite 61!
Zeichne Strecken von 10 cm und 20 cm Länge!
- ② Miß mit einem Meterstab die Länge und die Breite eines Zimmers!
Stelle nur die vollen Meter fest!
- ③ Schneide dir ein Stück Bindfaden von 1 m Länge!
Miß mit ihm, wie lang ungefähr euer Wohnzimmer, euer Haus, eure Küche ist!
- ④ Wie breit ist ungefähr der Klassenraum, das Schulhaus, euer Haus?
Gib auf dem Schulhof eine Strecke von 8 m, 6 m, 9 m, 10 m, 20 m, 5 m Länge an!
- ⑤ Udos Drachenschnur ist 15 m lang. Er knüpft noch ein Stück von 5 m Länge an.
Wie lang ist nun die Drachenschnur?
- ⑥ Eine Wäscheleine ist 20 m lang, eine andere ist 10 m länger.
Wie lang ist diese Leine?
- ⑦ Helga wirft den Ball 18 m weit. Ines wirft den Ball 2 m weiter.
Wie weit wirft Ines den Ball?

⑧

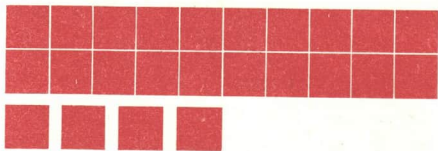


- ⑨ Nina hat 70 Pf gespart. Nun spart sie noch 20 Pf.
Wieviel Pfennig besitzt Nina jetzt?
- ⑩ Horst hat 60 Pf. Er kauft einen Block für 30 Pf.
Wieviel Geld hat Horst übrig?
- ⑪ Wieviel kosten 4 Hefte zu je 10 Pf?



$$20 + 4 = 24$$

$$24 = 20 + 4$$



$$24 = 2 \cdot 10 + 4$$

$$2 \quad 0 \quad + \quad 4 \quad = \quad 2 \quad 4$$

- ① Zeige die folgenden Zahlen am Hunderterquadrat!
- ② Lege ihre Ziffern mit Ziffernkarten!
- ③ Lies die Ziffern laut vor!
- ④ Schreibe die Ziffern ab!

23	24	20	21	29	78	53	22	25	27
30	42	38	44	92	26	35	76	52	58
18	81	47	74	68	62	32	67	66	85

90	+	3	=	93
20	+	7	=	27

①

20	+	3
30	+	5
50	+	7

②

10	+	8
60	+	9
80	+	4

③

40	+	6
90	+	2
70	+	1

④

60	+	5
70	+	5
80	+	5

⑤

58	=	50	+	8
----	---	----	---	---

47	42	93
32	33	85
65	48	97

⑥

79	44	36
61	54	86
22	24	96

⑦

17	97	99
11	31	39
21	68	29

⑧ Lege für die Zahlen aus den Aufgaben 5 bis 7 Zehnerstreifen und Einerquadrate!

⑨ Lege mit Rechengeld! 23 Pf, 32 Pf, 72 Pf, 27 Pf, 84 Pf, 48 Pf, 61 Pf, 16 Pf

⑩ Trage die Zahlen aus den Aufgaben 5 bis 7 in Stellentafeln ein!

10	1
4	7
⋮	⋮

⑪

e	30+e
2	
4	
5	
9	
8	

⑫

u	40+u
1	
3	
7	
0	
6	

⑬

i	80+i
1	
4	
7	
9	
6	

⑭

a	a · 10
1	
9	
10	
3	
2	

⑮

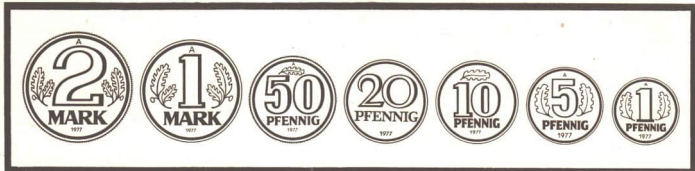
a	a · 10
4	
8	
7	
5	
6	

⑯

a	e	a · 10	a · 10 + e
2	1		
4	6		
5	9		
8	7		
3	0		

⑰

u	i	u · 10	u · 10 + i
9	7		
8	4		
5	1		
6	0		
2	9		



- ① Wechsle ein Zehnpfennigstück,
ein Fünfzigpfennigstück,
eine Mark in Pfennige!
- ② Wechsle eine Münze zu 50 Pf in Münzen zu je 10 Pf,
eine Mark in Münzen zu je 10 Pf!

30	+	x	=	34
				4
		x	=	4

③

$$20 + x = 27$$

$$40 + x = 46$$

$$90 + x = 93$$

x	+	7	=	27
				20
		x	=	20

④

$$x + 9 = 29$$

$$x + 7 = 47$$

$$x + 6 = 86$$

Helmut hat 40 M gespart. Er spart noch 5 M.
Wieviel hat er nun gespart?

40	+	5	=	45
----	---	---	---	----

Helmut hat nun 45 M gespart.

- ⑤ Inge hat 30 Pf, Elke hat 9 Pf mehr.
Wieviel Pfennig hat Elke?
- ⑥ Horst wirft den Ball 20 m weit. Herbert wirft ihn 3 m weiter.
Wieviel Meter weit wirft Herbert den Ball?
- ⑦ Dieter schneidet von einer Schnur von 90 cm Länge ein Stück von 30 cm Länge ab.
Wie lang ist die Schnur jetzt?
- ⑧ Eine Straße von 8 m Breite soll zweimal so breit werden.
Wie breit wird die Straße?

Die Ordnung der Zahlen von 0 bis 100

①

$0 < 1$	$10 < 11$	$20 < 21$	$30 < 31$...	$90 < 91$
$1 < 2$	$11 < 12$	$21 < 22$	\vdots		\vdots
$2 < 3$	$12 < 13$	\vdots			
$3 < 4$	\vdots				
\vdots	$19 < 20$	$29 < 30$	$39 < 40$		$99 < 100$
$9 < 10$					

② Vergleiche! 11, 12, 13, ..., 19 mit 20; 41, 42, 43, ..., 49 mit 50

③ Bilde Ungleichungen! | 10 20 | 40 50 | 50 60 | 70 80 | 90 100 |

④ Vergleiche! 60 mit 61, 62, 63, ..., 69; 20 mit 21, 22, 23, ..., 29

Vergleiche 23 mit 45!



$$23 < 45$$

⑤ Vergleiche! | 39 mit 44 | 27 mit 36 | 18 mit 25 | 73 mit 87 |
| 33 mit 45 | 21 mit 39 | 12 mit 24 | 75 mit 85 |

Vergleiche!

63 mit 81

$63 < 81$

denn $60 < 80$

Vergleiche!

⑥

22 mit 39

23 mit 41

82 mit 92

⑦

48 mit 73

52 mit 81

79 mit 96

⑧

36 mit 19

58 mit 29

85 mit 68

Aber:

Vergleiche!

62 mit 69

$62 < 69$

denn $2 < 9$

Vergleiche!

⑨

32 mit 36

44 mit 49

⑩

58 mit 59

82 mit 86

⑪

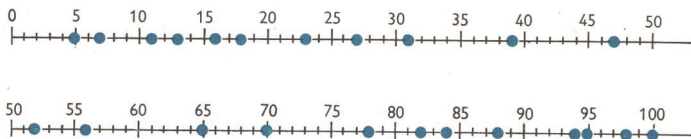
63 mit 65

96 mit 98

- Zähle! ① Von 21 bis 30, von 41 bis 50, von 81 bis 90, von 91 bis 100
 ② Von 25 bis 34, von 74 bis 83, von 17 bis 26, von 53 bis 62
 ③ Von 10 bis 30, von 40 bis 70, von 30 bis 50, von 75 bis 100
- Zähle! ④ Von 29 bis 20, von 89 bis 80, von 79 bis 70, von 49 bis 40
 ⑤ Von 45 bis 36, von 74 bis 65, von 53 bis 44, von 91 bis 82
 ⑥ Von 80 bis 60, von 90 bis 70, von 50 bis 20, von 70 bis 40

- Nenne die Nachfolger! ⑦ 5 15 25 35 95 ⑨ 27 83 65 72 91
 ⑧ 43 83 73 23 13 ⑩ 89 99 69 59 79
- Nenne die Vorgänger! ⑪ 7 17 27 37 47 ⑬ 53 84 26 37 45
 ⑫ 11 31 81 71 61 ⑭ 80 70 90 30 60

- ⑮ Welchen Zahlen sind blaue Kreise zugeordnet?



- ⑯ Zeige am Zahlenstrahl! 8, 12, 17, 19, 25, 32, 36, 38, 43, 45, 46, 49,
 51, 54, 63, 66, 72, 74, 81, 85, 86, 90, 92, 97

Ordne die Zahlen der Größe nach!
 Beginne mit der kleinsten Zahl!

- ⑰ 46, 55, 57, 48 ⑱ 61, 47, 54, 53 ⑲ 49, 59, 58, 50
 ⑳ 60, 51, 56, 52

Ordne die Zahlen der Größe nach!
 Beginne mit der größten Zahl!

- ⑳ 73, 78, 72, 75 ㉒ 23, 42, 19, 51 ㉓ 89, 92, 90, 88
 ㉔ 13, 31, 62, 26

- ① Welche Zahlen liegen zwischen 19 und 25 39 und 42 56 und 62 78 und 82
28 und 33 47 und 51 67 und 73 89 und 94?

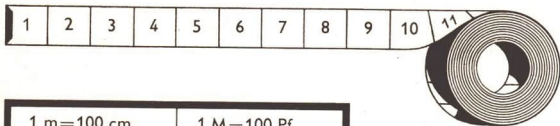
- ② Welcher Zehner folgt auf 27, 45, 63, 82, 96?

- ③ Auf welchen Zehner folgt 11, 34, 59, 73, 98?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

- ④ Zeige das 3., 5., 13., 17., 22., 28., 39., 47., 56., 61., 69., 77., 82., 88., 96. Kästchen!
⑤ Welche Kästchen sind blau?
⑥ Nenne die Ordnungszahlwörter zur 4. Zeile!
⑦ Nenne die Ordnungszahlwörter zur 7. Spalte!

Wiederholung



1 m = 100 cm

1 M = 100 Pf

Wie lang sind diese Strecken?



Zeige am Meterstab! ⑥ 4 cm, 40 cm, 20 cm, 70 cm, 100 cm

⑦ 17 cm, 71 cm, 84 cm, 48 cm, 8 cm

Lege mit Rechengeld! ⑧ 8 Pf, 20 Pf, 70 Pf, 25 Pf, 100 Pf

⑨ 35 Pf, 53 Pf, 73 Pf, 37 Pf, 7 Pf

0, 1, 2, 3, 4, ..., 98, 99, 100 sind natürliche Zahlen.

Die natürlichen Zahlen sind der Größe nach geordnet.

Vergleiche!	⑩	⑪	⑫	⑬	⑭
	30 70	24 44	35 37	72 27	70 7
	80 20	75 35	49 41	95 59	17 70
	60 60	67 77	76 73	38 83	71 70

Suche den Nachfolger! ⑮ 8, 18, 38, 43, 93 ⑯ 9, 29, 49, 79, 99

Suche den Vorgänger! ⑰ 7, 17, 47, 55, 25 ⑱ 10, 30, 70, 100, 50



$$4+2=6$$

$$2+4=6$$

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

⑤	⑥	⑦	⑧	⑨	⑩
3+6	2+4	2+8	2+9	3+9	4+9
4+5	1+7	4+6	4+8	4+7	7+8
2+7	3+4	3+7	5+7	6+7	6+8
1+8	2+5	1+9	3+8	5+8	5+6

⑪			⑫		⑬		⑭	
2-1	3-1	4-1	5-1	6-1	7-1	8-1	9-1	10-1
	3-2	4-2	5-2	6-2	7-2	8-2	9-2	10-2
		4-3	5-3	6-3	7-3	8-3	9-3	10-3
			5-4	6-4	7-4	8-4	9-4	10-4
				6-5	7-5	8-5	9-5	10-5
					7-6	8-6	9-6	10-6
						8-7	9-7	10-7
							9-8	10-8
								10-9



$$6-2=4 \quad \text{oder} \quad 6-2=4$$

$$4+2=6 \quad \quad \quad 2+4=6$$

⑮								
11-2								
11-3	12-3	⑯						
11-4	12-4	13-4						
11-5	12-5	13-5	14-5	⑰				
11-6	12-6	13-6	14-6	15-6				
11-7	12-7	13-7	14-7	15-7	16-7	⑱		
11-8	12-8	13-8	14-8	15-8	16-8	17-8		
11-9	12-9	13-9	14-9	15-9	16-9	17-9	18-9	



$4+2=6$

$14+2=16$

$40+20=60$

①	②	③	④	⑤	⑥
$3+2$	$6+3$	$10-5$	$8-3$	$7-4$	$10-3$
$13+2$	$16+3$	$30-5$	$18-3$	$17-4$	$20-3$
$30+20$	$60+30$	$100-50$	$80-30$	$70-40$	$100-30$

⑦	⑧	⑨	⑩	⑪	⑫
$14+2$	$16+4$	$18-3$	$20-3$	$19-4$	$19-7$
$18+1$	$12+8$	$20-2$	$20-5$	$14+3$	$16-5$
$13+4$	$17+3$	$17-4$	$20-6$	$18-4$	$15+5$
$12+7$	$14+6$	$17-6$	$20-8$	$13+6$	$13+3$
$16+3$	$15+5$	$16-4$	$20-2$	$19-5$	$18-5$

⑬	⑭	⑮	⑯	⑰	⑱
$40+20$	$90-10$	$100-30$	$80-30$	$30+7$	$80+5$
$30+40$	$80-20$	$100-50$	$50+20$	$50+3$	$50+4$
$50+30$	$70-30$	$100-60$	$70-60$	$80+6$	$70+9$
$70+20$	$60-40$	$100-80$	$80-40$	$60+5$	$90+8$
$10+80$	$50-50$	$100-20$	$50+10$	$30+9$	$10+6$

⑲	⑳				
$3+0$	$0+4$	$0+3$	$7-0$	$7-7$	$4-4$
$5+0$	$0+2$	$0+7$	$5-0$	$3-3$	$9-9$
$7+0$	$0+8$	$0+5$	$6-0$	$5-5$	$8-8$

addieren, plus, Summand, Summe, subtrahieren, minus, Differenz

Summanden kann man vertauschen.

Summanden kann man beliebig zusammenfassen.

⑳	㉑	㉒	㉓	㉔	㉕
$8+2+4$	$14+2+2$	$12-2-4$	$12-6$	$11-9$	
$7+3+5$	$15+2+1$	$13-3-5$	$14-9$	$15-8$	
$5+5+2$	$12+3+2$	$17-7-2$	$13-4$	$16-8$	

①	②	③	④
$1 \cdot 2$	$2 \cdot 1$	$1 + 1$	$2 : 2$
$2 \cdot 2$	$2 \cdot 2$	$2 + 2$	$4 : 2$
$3 \cdot 2$	$2 \cdot 3$	$3 + 3$	$6 : 2$
$4 \cdot 2$	$2 \cdot 4$	$4 + 4$	$8 : 2$
$5 \cdot 2$	$2 \cdot 5$	$5 + 5$	$10 : 2$
$6 \cdot 2$	$2 \cdot 6$	$6 + 6$	$12 : 2$
$7 \cdot 2$	$2 \cdot 7$	$7 + 7$	$14 : 2$
$8 \cdot 2$	$2 \cdot 8$	$8 + 8$	$16 : 2$
$9 \cdot 2$	$2 \cdot 9$	$9 + 9$	$18 : 2$
$10 \cdot 2$	$2 \cdot 10$	$10 + 10$	$20 : 2$



$$2 \cdot 4 = 8$$

$$4 \cdot 2 = 8$$

$$8 : 2 = 4 \quad 8 : 2 = 4$$

oder

$$4 \cdot 2 = 8 \quad 2 \cdot 4 = 8$$

⑤	⑥	⑦	⑧	⑨	⑩
$3 \cdot 2$	$6 \cdot 2$	$2 \cdot 8$	$2 \cdot 10$	$12 : 2$	$14 : 2$
$5 \cdot 2$	$1 \cdot 2$	$2 \cdot 5$	$2 \cdot 1$	$8 : 2$	$10 : 2$
$8 \cdot 2$	$9 \cdot 2$	$2 \cdot 9$	$2 \cdot 7$	$16 : 2$	$2 : 2$
$7 \cdot 2$	$4 \cdot 2$	$2 \cdot 4$	$2 \cdot 3$	$4 : 2$	$18 : 2$
$2 \cdot 2$	$10 \cdot 2$	$2 \cdot 6$	$2 \cdot 2$	$20 : 2$	$6 : 2$

⑪	⑫	⑬	⑭
$2 \cdot 1$	$1 \cdot 2$	$4 : 1$	$5 : 5$
$8 \cdot 1$	$1 \cdot 8$	$8 : 1$	$2 : 2$
$4 \cdot 1$	$1 \cdot 3$	$6 : 1$	$8 : 8$

$a \cdot 1 = a$	$a : 1 = a$
$1 \cdot a = a$	$a : a = 1$ wenn $a > 0$

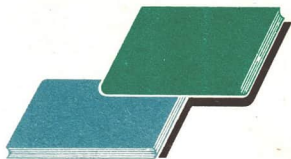
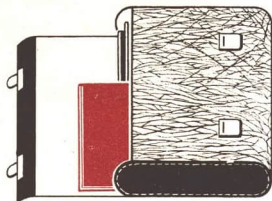
mal, geteilt durch; Faktor Faktoren kann man vertauschen.

⑮	⑯	⑰	⑱	⑲	⑳
$2 \cdot 10$	$5 \cdot 10$	$10 \cdot 10$	$10 \cdot 3$	$10 \cdot 2$	$10 \cdot 6$
$4 \cdot 10$	$3 \cdot 10$	$7 \cdot 10$	$10 \cdot 7$	$10 \cdot 10$	$10 \cdot 9$
$8 \cdot 10$	$6 \cdot 10$	$9 \cdot 10$	$10 \cdot 4$	$10 \cdot 5$	$10 \cdot 8$

Bilde Gleichungen!

⑳	㉑	㉒	㉓	㉔
$8 \ 2 \ 10$	$10 \ 2 \ 20$	$16 \ 7 \ 9$	$1 \ 9 \ 10$	
$8 \ 2 \ 16$	$10 \ 2 \ 8$	$8 \ 5 \ 13$	$2 \ 9 \ 18$	
$8 \ 2 \ 6$	$10 \ 2 \ 5$	$5 \ 5 \ 1$	$4 \ 2 \ 8$	
$8 \ 2 \ 4$	$10 \ 2 \ 12$	$9 \ 2 \ 18$	$4 \ 2 \ 6$	

①



②

a	$a+3$
4	
7	
14	
17	
30	

③

e	$e-4$
8	
12	
17	
15	
20	

④

i	$i \cdot 2$
3	
9	
4	
6	
2	

⑤

u	$u : 2$
8	
14	
20	
6	
16	

⑥

a	e	$a+e$
8	7	
9	5	
7	9	
7	6	
5	8	

⑦

a	i	$a-i$
11	7	
13	4	
18	9	
12	5	
13	5	

⑧

i	u	$i \cdot u$
8	2	
2	7	
10	2	
2	9	
4	2	

⑨

$$\begin{array}{l} a < 3 \\ e < 2 \\ i < 4 \end{array}$$

⑩

$$\begin{array}{l} 4 > a \\ 2 > i \\ 3 > u \end{array}$$

⑪

$$\begin{array}{l} 3+a < 7 \\ 15+a < 16 \\ 6+a < 10 \end{array}$$

⑫

$$\begin{array}{l} 6-a > 4 \\ 19-a > 15 \\ 5-a > 2 \end{array}$$

⑬

$$\begin{array}{l} 8-a > 4 \\ 15-a > 14 \\ 18-a > 15 \end{array}$$

⑭

$$\begin{array}{l} 4+x=7 \\ 6+x=10 \\ 14+x=17 \\ 8+x=12 \\ 30+x=70 \end{array}$$

⑮

$$\begin{array}{l} x+3=7 \\ x+3=12 \\ x+7=19 \\ x+8=20 \\ x+10=70 \end{array}$$

⑯

$$\begin{array}{l} 8-x=4 \\ 12-x=9 \\ 19-x=15 \\ 20-x=14 \\ 80-x=40 \end{array}$$

⑰

$$\begin{array}{l} x-3=5 \\ x-4=8 \\ x-4=16 \\ x-10=50 \\ x-5=6 \end{array}$$



- ② 60 Kinder und 7 Lehrer fahren in ein Lager.
Wieviel Fahrkarten werden gebraucht?
- ③ Im Lager sind 70 Kinder. 40 von den Kindern sind Mädchen.
Wieviel Jungen sind im Lager?
- ④ Im Lager stehen die Zelte in 2 Reihen. In jeder Reihe stehen 8 Zelte.
Wieviel Zelte stehen im Lager?
- ⑤ Andreas wirft den Ball 20 m weit. Uwe wirft den Ball noch 10 m weiter.
Wie weit wirft Uwe den Ball?
- ⑥ 10 Pioniere wollen Fußball spielen. Sie bilden 2 Mannschaften.
Wieviel Pioniere gehören zu jeder Mannschaft?

⑦

⑧

⑨

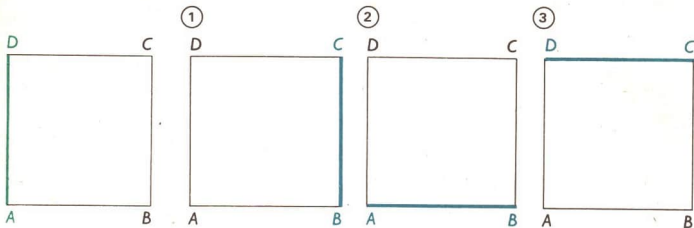
⑩

Bilde Gleichungen!

10	3	30	12	2	10	7	2	14	3	2	6
10	3	13	12	2	14	7	2	5	3	2	1
10	3	7	12	2	6	7	2	9	3	2	5

Wo liegen die Strecken?

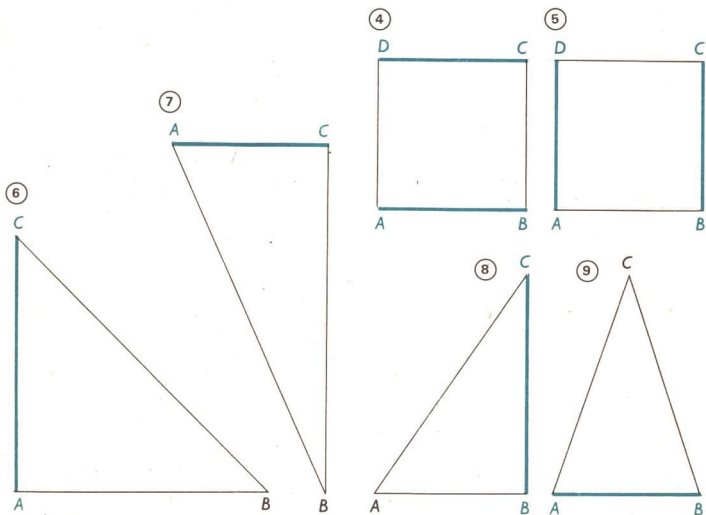
Wo liegen die Punkte?

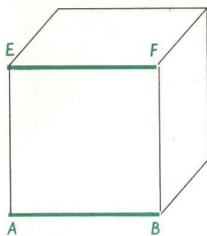


Die Strecke \overline{AD} liegt links.

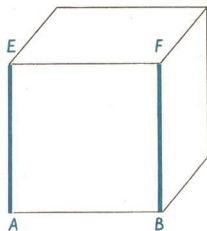
Der Punkt A liegt links unten.

Der Punkt D liegt links oben.

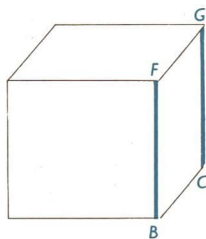




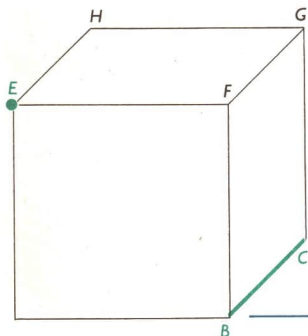
Die Strecke \overline{AB} liegt vorn unten.
Die Strecke \overline{EF} liegt vorn oben.



① Wo liegen die Strecken \overline{AE} , \overline{BF} ?



② Wo liegen die Strecken \overline{BF} , \overline{CG} ?













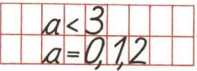
Die Strecke \overline{BC} liegt unten rechts. Wo liegen die Strecken? ③ \overline{EF} , \overline{AB} , \overline{AE} , \overline{BF}

④ \overline{CG} , \overline{EH} , \overline{HG} , \overline{FG}

Der Punkt E liegt vorn oben links. Wo liegen die Punkte? ⑤ A, B, C ⑥ F, G, H

Erläuterungen zur Arbeit mit dem Buch für Eltern und Horterzieher

Beim Vorherrschen der Farbe	findet der Schüler	zum Beispiel	auf Seite
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	Beispiele und ausgeführte Beispielaufgaben	 	12
	Aufgaben		12
	Zusammenfassungen, Systematisierungen, Merksätze	<div style="border: 2px solid black; padding: 5px; display: inline-block;"> <p>< Das ist das Zeichen für „ist kleiner als“.</p> </div>	12

Es werden unterschieden	zum Beispiel	auf Seite
Übungen, die nur mündlich durchgeführt werden sollen	<div style="border: 1px solid red; padding: 2px; display: inline-block;"> $a < 3$ </div> Wenn $a = 0$, so $a < 3$ Wenn $a = 1$, so $a < 3$ Wenn $a = 2$, so $a < 3$	55
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