

# Arbeitsmaterial

## Zahlzerlegungen und Zahlzusammensetzungen automatisieren und üben im Zahlenraum bis 20

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Unter Beratung von Samira Cormann, Lara Graf, Uta Häsel-Weide, Anna Nothofer, Marcus Nührenbörger, Inga Wienhues & Alissa Werner

Mai 2023



Dieses Material wurde von Lena Maiß, Heike Buddenberg, Sophie Mense, Franziska Tilke & Karina Höveler unter Beratung von: Samira Cormann, Lara Marie Graf, Uta Häsel-Weide, Anna Nothofer, Marcus Nührenbörger, Inga Wienhues & Alissa Werner entwickelt. Es kann unter der Creative Commons Lizenz BY-NC-SA (Namensnennung – Nicht kommerziell – Weitergabe unter gleichen Bedingungen) 4.0 International weiterverwendet werden

### Zitierbar als

Maiß, L., Buddenberg, H., Mense, S., Tilke, F. & Höveler, K. (2023). Ablösung vom zählenden Rechnen (2) Zahlzerlegungen und Zahlzusammensetzungen automatisieren und üben im Zahlenraum bis 20. Open Educational Resources. Online frei zugreifbar unter <https://maco.dzlm.de/node/51>.

### Projektherkunft

Dieses Material wurde für das Projekt Mathematik aufholen nach Corona erstellt und wird auch im Projekt QuaMath weiter genutzt (beide Projekte gemeinsam von den Ländern finanziert).

### Hinweis zu verwandtem Material

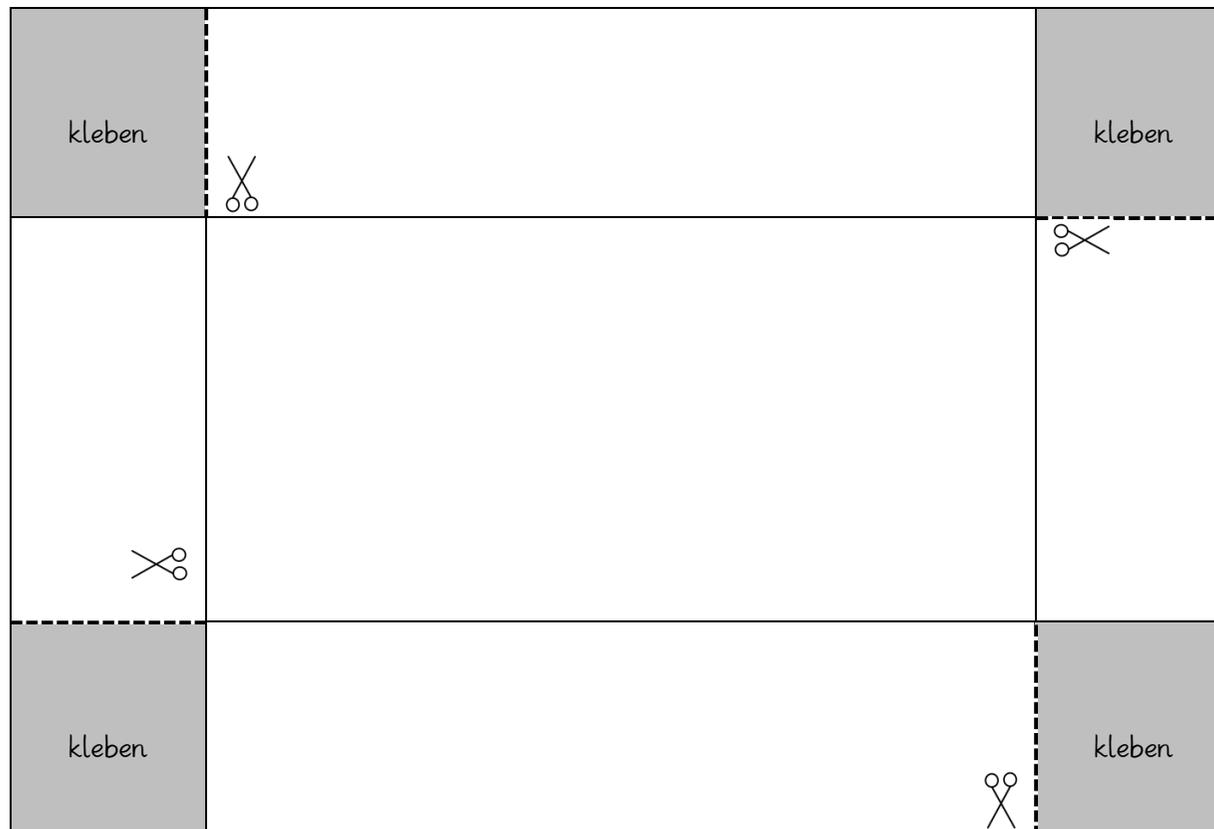
Zu dem Material liegt ein Kommentar für Lehrkräfte zum didaktischen Hintergrund vor, zu finden auf der gleichen Webseite wie das Material selbst.  
Zudem liegen noch weitere Fördermaterialien und didaktische Hinweise zur Ablösung vom Zählenden Rechnen vor



## Automatisieren mit der Lernkartei

### Karteikasten

DIN A3 Ausdruck für Karteikartenkasten (für DIN A8 Karten)



	1. Wiederholung	
	kleben	

	3. Wiederholung	
	kleben	

	2. Wiederholung	
	kleben	

	Kann ich!	
	kleben	

## Automatisierungskartei

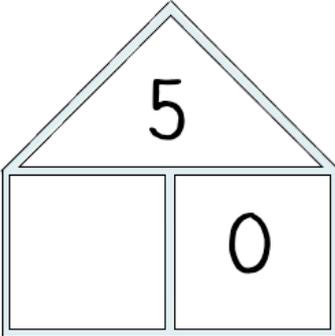
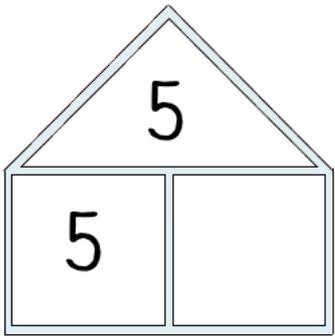
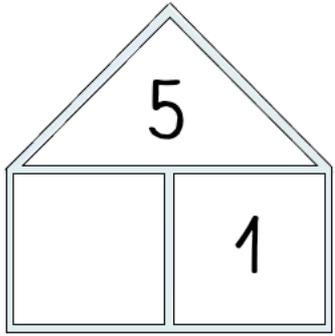
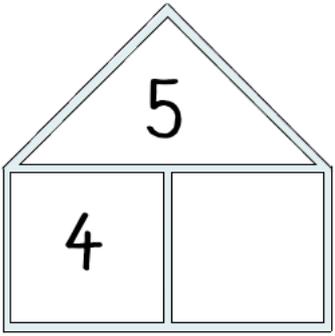
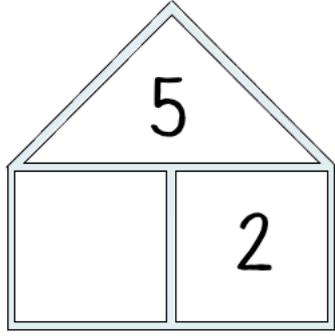
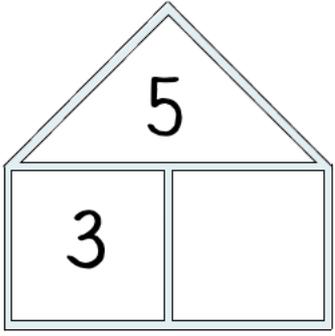
- 1 Strategiegruppe: Zerlegungen von 5 (Fingerbild)
- 2 Strategiegruppe: Zerlegungen von 5 (Zwanzigerfeld)
- 3 Strategiegruppe: Zerlegungen mit 5 (Fingerbild)
- 4 Strategiegruppe: Zerlegungen mit 5 (Zwanzigerfeld)
- 5 Strategiegruppe: Zerlegungen von 10 (Fingerbild)
- 6 Strategiegruppe: Zerlegungen von 10 (Zwanzigerfeld)
- 7 Strategiegruppe: Zerlegungen mit 1
- 8 Strategiegruppe: Zerlegungen mit 0
- 9 Strategiegruppe: Zerlegungen in zwei gleiche Teile
- 10 Strategiegruppe: Zerlegungen mit 10
- 11 Strategiegruppe: Schwierige Zerlegungen

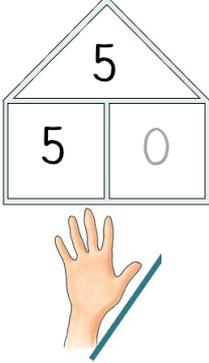
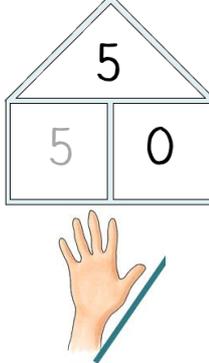
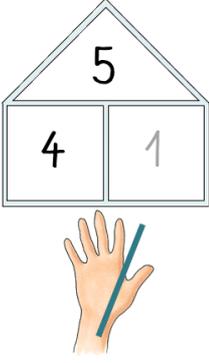
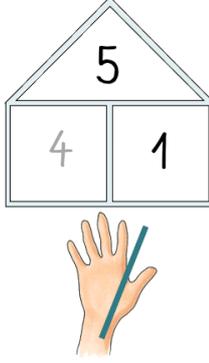
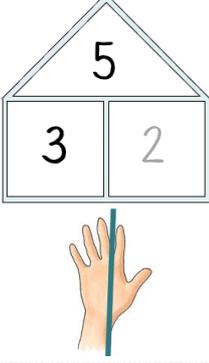
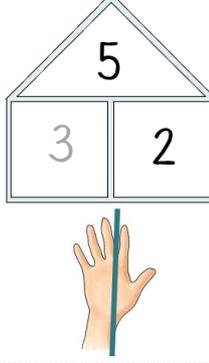
Drucken Sie die Karteikarten doppelseitig aus. Auf der Vorderseite sieht man dann die zu ergänzende Zerlegung, auf der Rückseite die Lösung und eine bildliche Erklärung.

Die Strategiegruppen „Zerlegungen mit 5“, „Zerlegungen von 5“ und „Zerlegungen von 10“ finden Sie in doppelter Ausführung: einmal mit einer bildlichen Darstellung mit Hilfe der Hände und einmal mit einer bildlichen Darstellung auf dem Zwanzigerfeld.

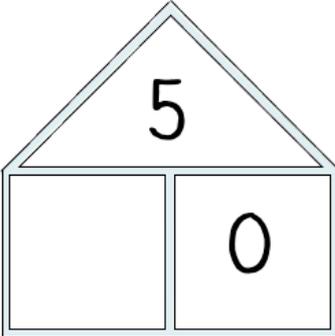
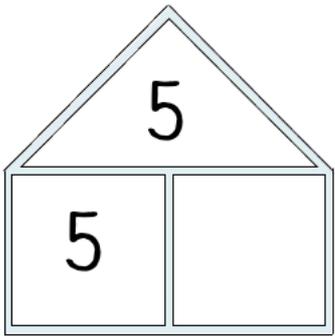
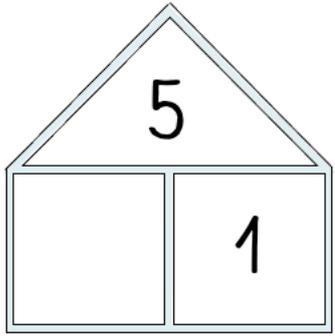
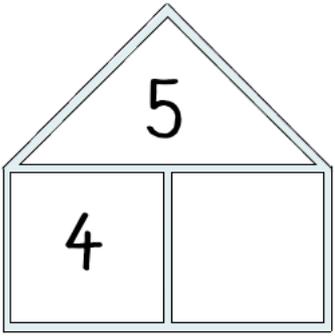
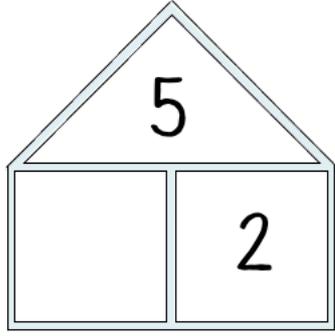
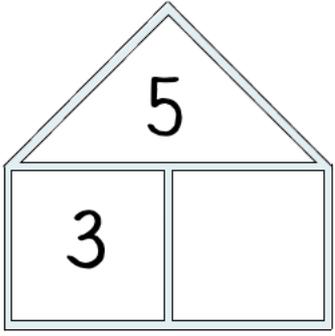
Die Hände sind im Zahlenraum bis 10 ein hilfreiches Anschauungsmittel für die Lernenden, da sie immer verfügbar sind. Die Darstellung auf dem Zwanzigerfeld ist hingegen tragfähiger bei der Erweiterung des Zahlenraums. Entscheiden Sie, welche Darstellungsweise für Ihre Lernenden zu dem jeweiligen Zeitpunkt die passendere Anschauung ist.

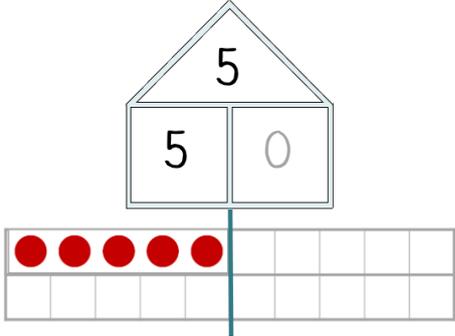
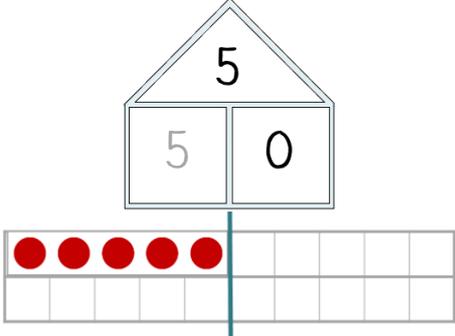
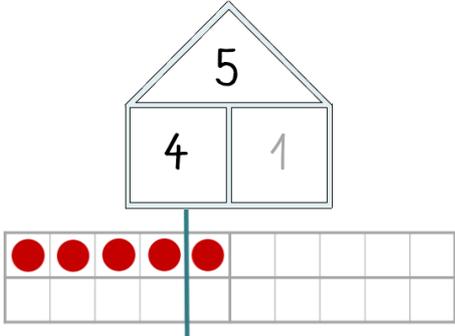
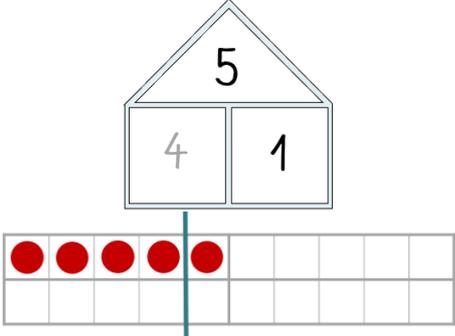
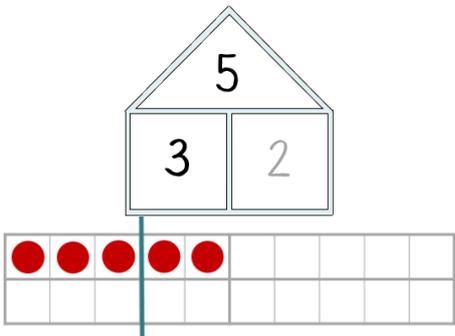
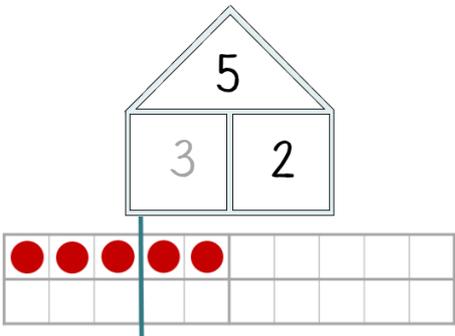
# 1 Zerlegungen von 5 (Fingerbild)

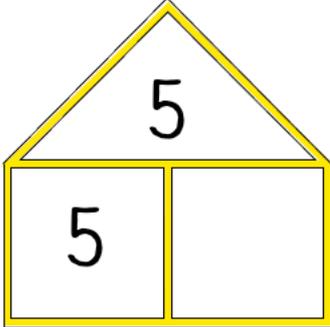
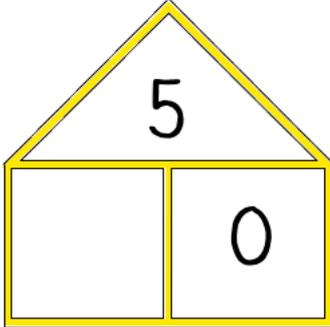
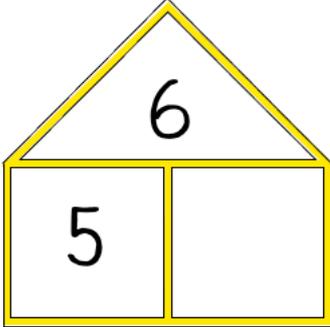
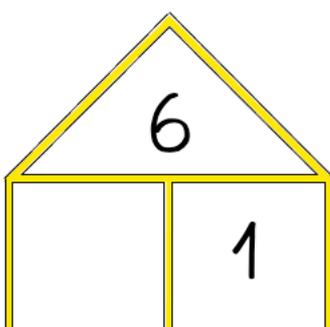
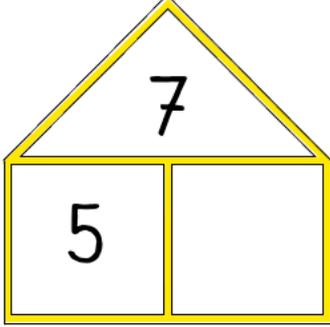
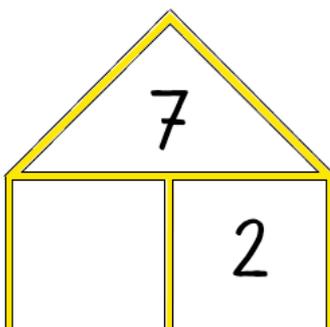
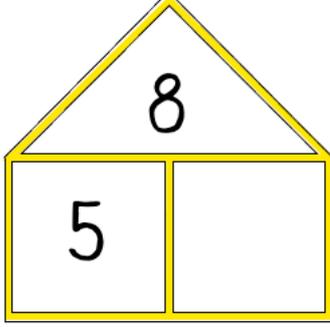
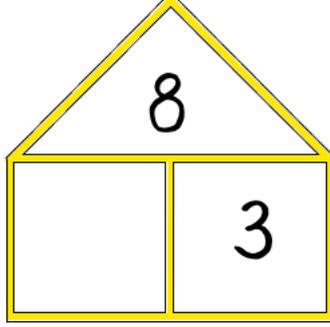
	
	
	

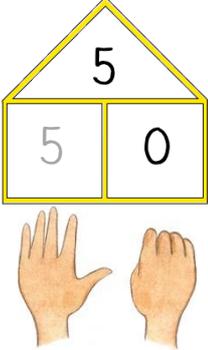
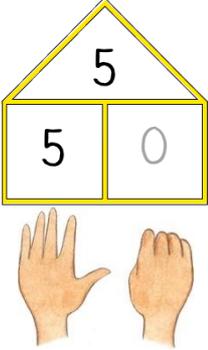
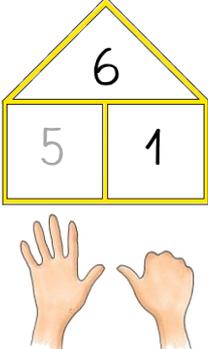
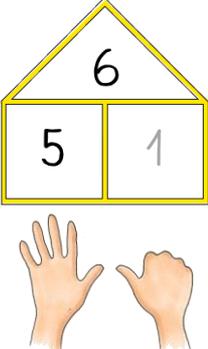
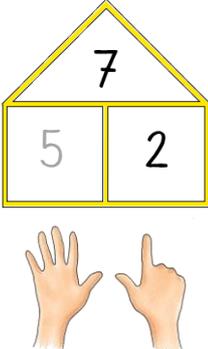
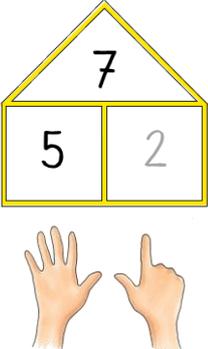
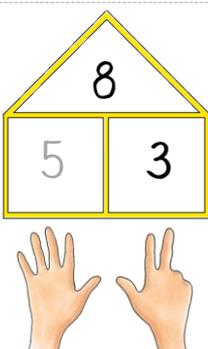
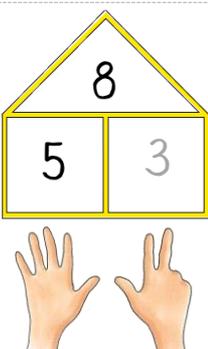
## 2 Zerlegungen von 5 (Zwanzigerfeld)

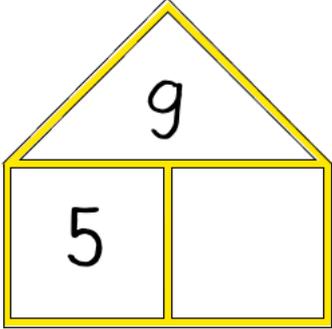
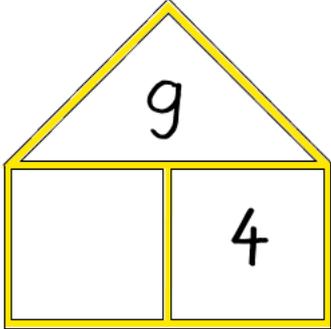
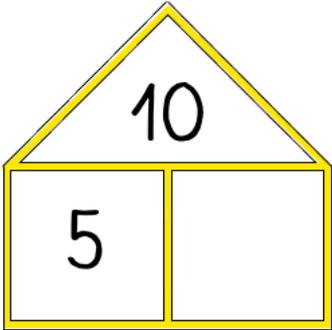
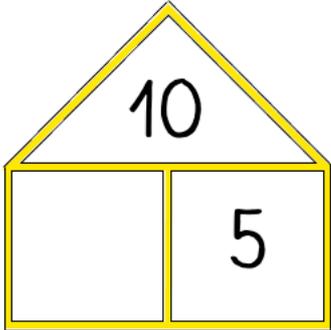
	
	
	

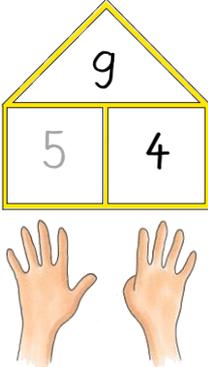
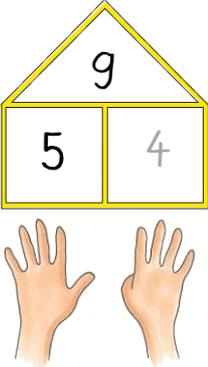
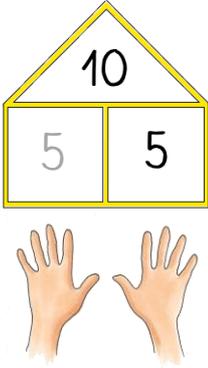
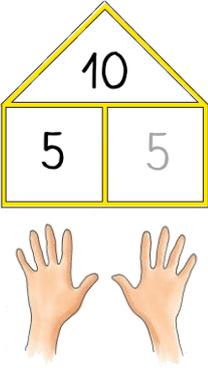
	
	
	

### 3 Zerlegungen mit 5 (Fingerbild)

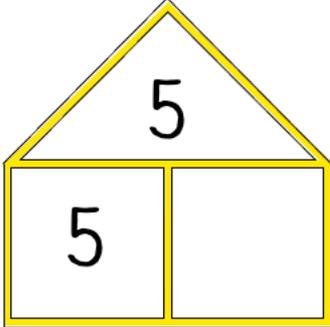
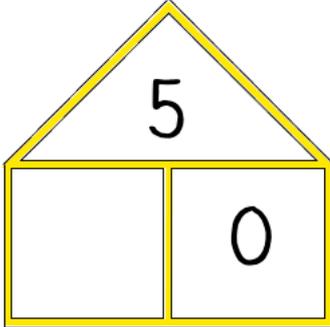
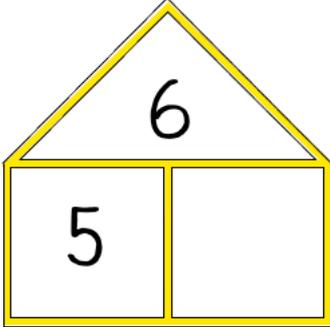
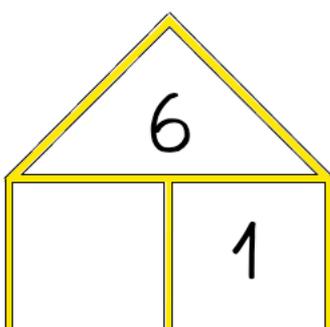
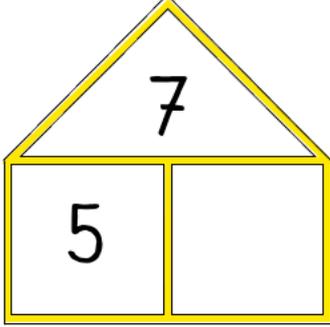
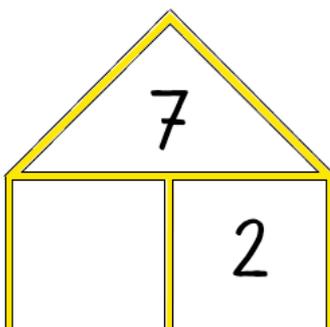
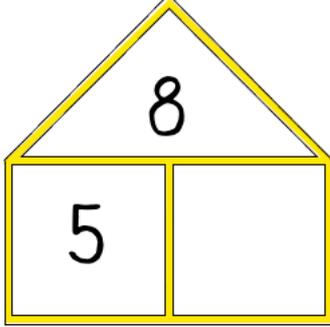
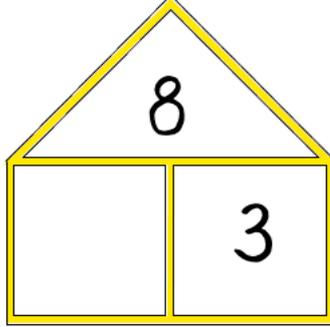
	
	
	
	

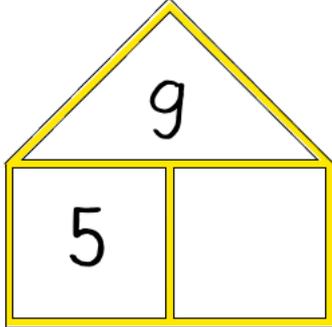
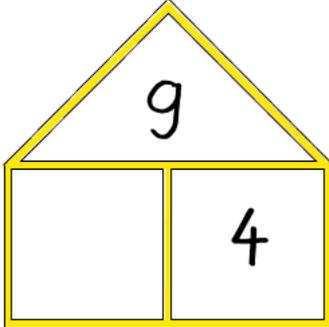
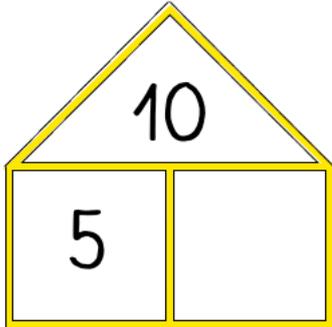
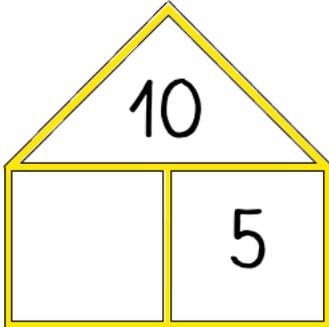
 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two rooms. The number 9 is in the roof, and the number 5 is in the left room. The right room is empty.</p>	 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two rooms. The number 9 is in the roof, and the number 4 is in the right room. The left room is empty.</p>
 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two rooms. The number 10 is in the roof, and the number 5 is in the left room. The right room is empty.</p>	 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two rooms. The number 10 is in the roof, and the number 5 is in the right room. The left room is empty.</p>

#### 4 Zerlegungen mit 5 (Zwanzigerfeld)

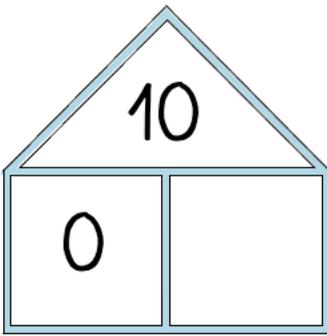
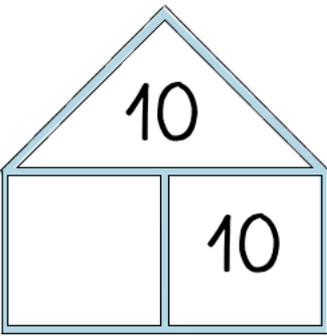
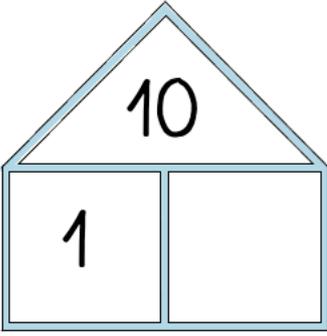
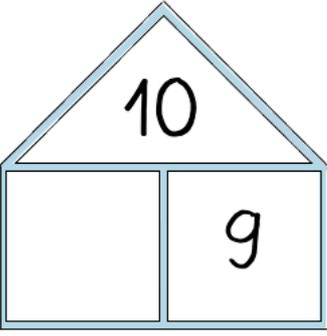
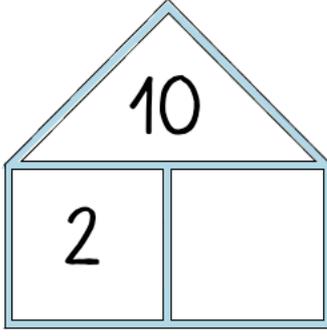
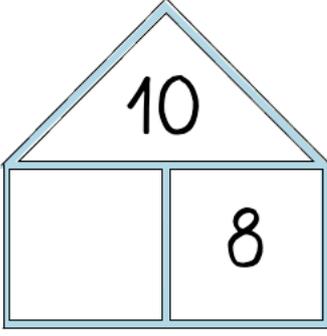
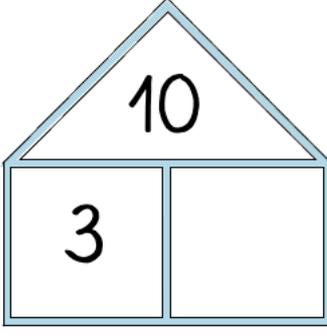
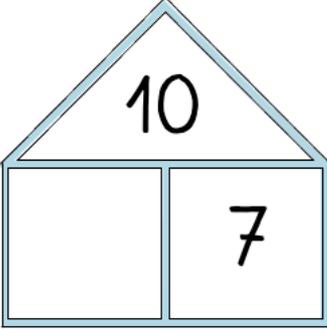
<p>House-shaped number 5. The roof contains the number 5. The main body is divided into two boxes: the left box contains 5 and the right box contains 0. Below the house is a ten-frame with a vertical line separating the tens and ones columns. The top row of the ten-frame contains 5 red dots, representing the number 5.</p>	<p>House-shaped number 5. The roof contains the number 5. The main body is divided into two boxes: the left box contains 5 and the right box contains 0. Below the house is a ten-frame with a vertical line separating the tens and ones columns. The top row of the ten-frame contains 5 red dots, representing the number 5.</p>
<p>House-shaped number 6. The roof contains the number 6. The main body is divided into two boxes: the left box contains 5 and the right box contains 1. Below the house is a ten-frame with a vertical line separating the tens and ones columns. The top row of the ten-frame contains 6 red dots, representing the number 6.</p>	<p>House-shaped number 6. The roof contains the number 6. The main body is divided into two boxes: the left box contains 5 and the right box contains 1. Below the house is a ten-frame with a vertical line separating the tens and ones columns. The top row of the ten-frame contains 6 red dots, representing the number 6.</p>
<p>House-shaped number 7. The roof contains the number 7. The main body is divided into two boxes: the left box contains 5 and the right box contains 2. Below the house is a ten-frame with a vertical line separating the tens and ones columns. The top row of the ten-frame contains 7 red dots, representing the number 7.</p>	<p>House-shaped number 7. The roof contains the number 7. The main body is divided into two boxes: the left box contains 5 and the right box contains 2. Below the house is a ten-frame with a vertical line separating the tens and ones columns. The top row of the ten-frame contains 7 red dots, representing the number 7.</p>
<p>House-shaped number 8. The roof contains the number 8. The main body is divided into two boxes: the left box contains 5 and the right box contains 3. Below the house is a ten-frame with a vertical line separating the tens and ones columns. The top row of the ten-frame contains 8 red dots, representing the number 8.</p>	<p>House-shaped number 8. The roof contains the number 8. The main body is divided into two boxes: the left box contains 5 and the right box contains 3. Below the house is a ten-frame with a vertical line separating the tens and ones columns. The top row of the ten-frame contains 8 red dots, representing the number 8.</p>

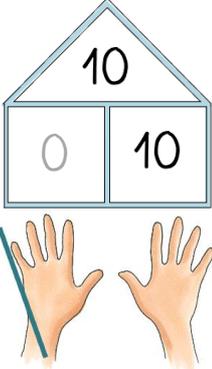
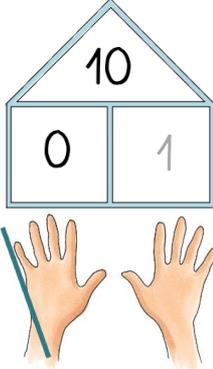
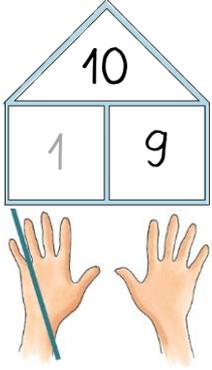
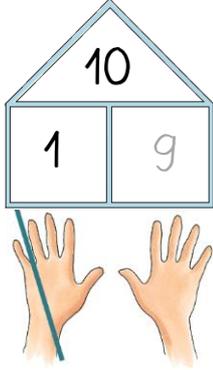
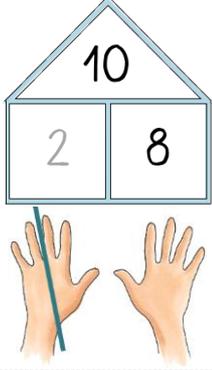
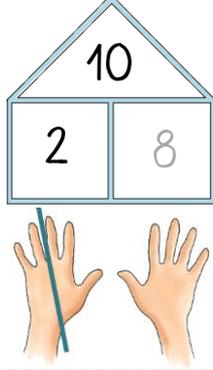
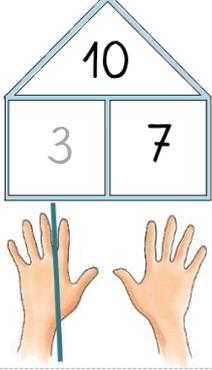
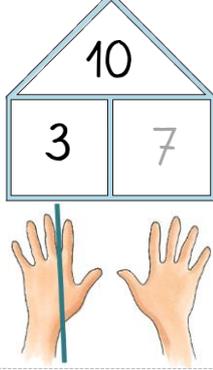
 <p>A house-shaped diagram with a triangular roof containing the number 9. The rectangular base is divided into two boxes, with the number 5 in the left box and an empty space in the right box.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 9. The rectangular base is divided into two boxes, with an empty space in the left box and the number 4 in the right box.</p>
 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two boxes, with the number 5 in the left box and an empty space in the right box.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two boxes, with an empty space in the left box and the number 5 in the right box.</p>

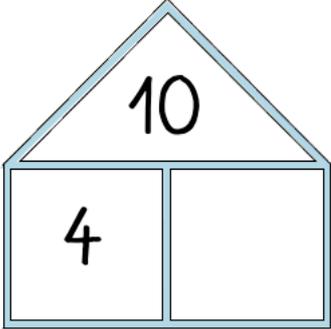
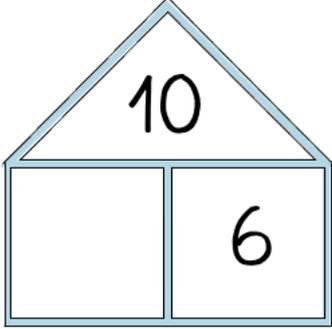
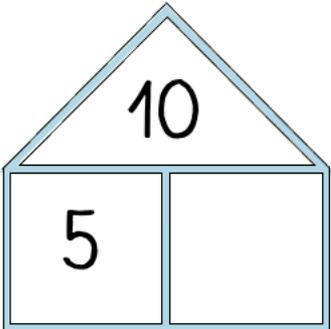
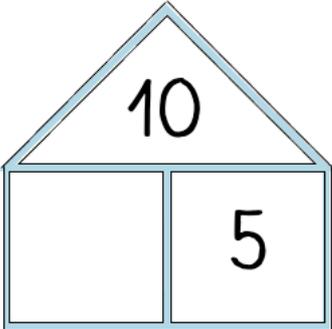
The image displays four place value charts arranged in a 2x2 grid. Each chart consists of a house-shaped diagram above a ten-frame. The house diagram has a triangular roof and a rectangular base divided into two columns. The number in the roof represents the total value, and the numbers in the columns represent the tens and ones places. The ten-frame below has a vertical line separating the tens column (left) from the ones column (right). Red dots are placed in the ten-frame to represent the value.

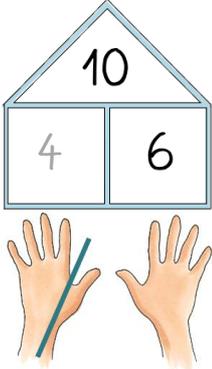
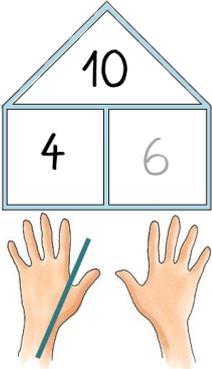
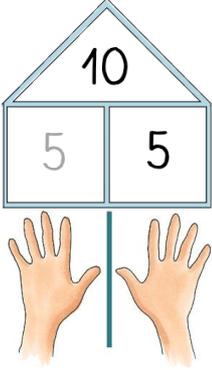
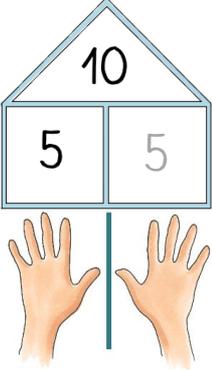
- Top-left chart:** The house diagram has the number 9 in the roof, 5 in the left column, and 4 in the right column. The ten-frame has 9 red dots: 5 in the tens column and 4 in the ones column.
- Top-right chart:** The house diagram has the number 9 in the roof, 5 in the left column, and 4 in the right column. The ten-frame has 9 red dots: 5 in the tens column and 4 in the ones column.
- Bottom-left chart:** The house diagram has the number 10 in the roof, 5 in the left column, and 5 in the right column. The ten-frame has 10 red dots: 5 in the tens column and 5 in the ones column.
- Bottom-right chart:** The house diagram has the number 10 in the roof, 5 in the left column, and 5 in the right column. The ten-frame has 10 red dots: 5 in the tens column and 5 in the ones column.

## 5 Zerlegungen von 10 (Fingerbild)

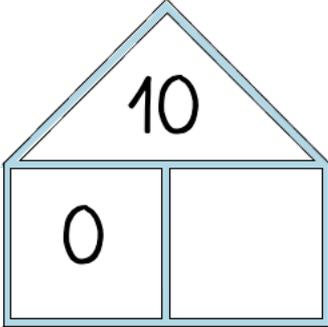
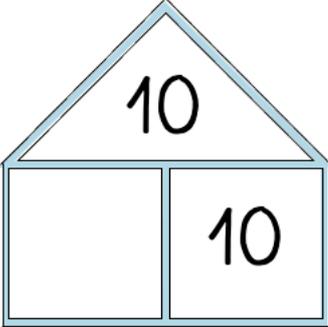
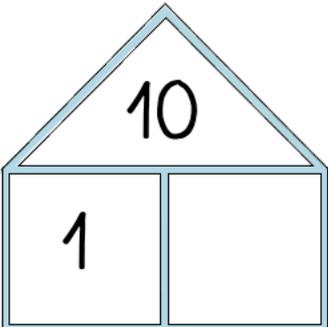
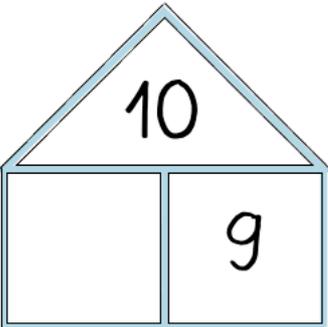
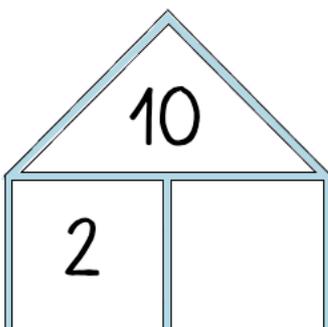
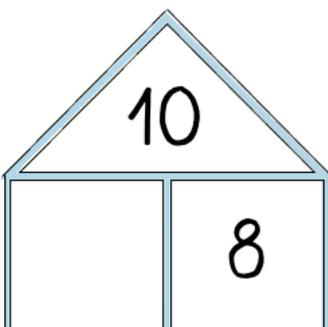
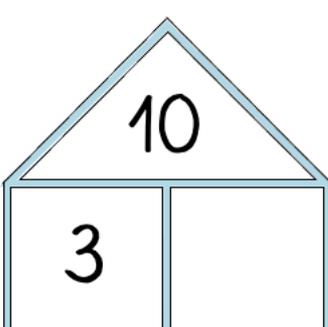
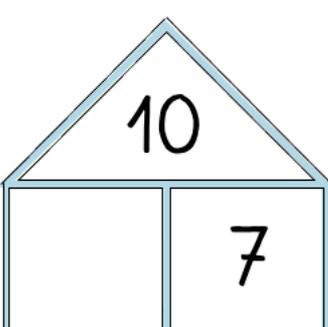
 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two equal squares. The left square contains the number 0, and the right square is empty.</p>	 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two equal squares. The left square is empty, and the right square contains the number 10.</p>
 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two equal squares. The left square contains the number 1, and the right square is empty.</p>	 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two equal squares. The left square is empty, and the right square contains the number 9.</p>
 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two equal squares. The left square contains the number 2, and the right square is empty.</p>	 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two equal squares. The left square is empty, and the right square contains the number 8.</p>
 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two equal squares. The left square contains the number 3, and the right square is empty.</p>	 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two equal squares. The left square is empty, and the right square contains the number 7.</p>

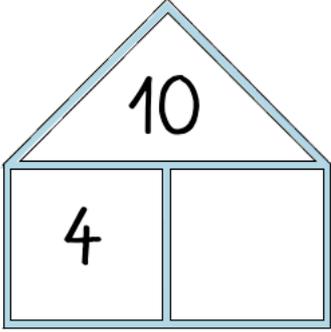
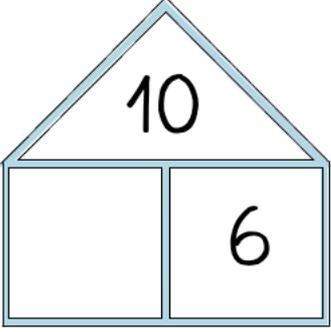
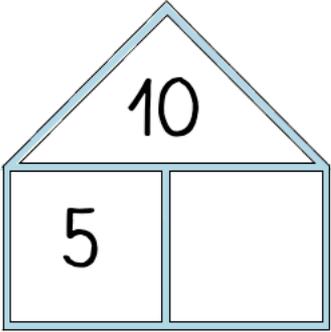
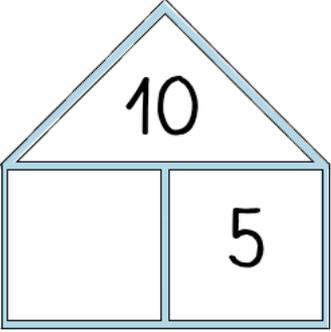
 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room contains the number 4, and the right room is empty.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room is empty, and the right room contains the number 6.</p>
 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room contains the number 5, and the right room is empty.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room is empty, and the right room contains the number 5.</p>

 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two boxes containing the numbers 4 and 6. Below the house are two hands. A vertical line is drawn through the left hand, representing the number 4.</p>	 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two boxes containing the numbers 4 and 6. Below the house are two hands. A vertical line is drawn through the left hand, representing the number 4.</p>
 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two boxes containing the numbers 5 and 5. Below the house are two hands. A vertical line is drawn between the two hands, representing the number 5.</p>	 <p>A house-shaped diagram with the number 10 in the triangular roof. The rectangular base is divided into two boxes containing the numbers 5 and 5. Below the house are two hands. A vertical line is drawn between the two hands, representing the number 5.</p>

## 6 Zerlegungen von 10 (Zwanzigerfeld)

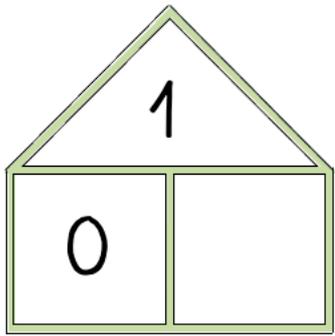
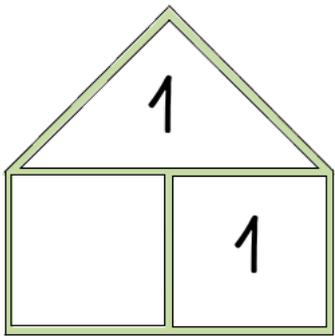
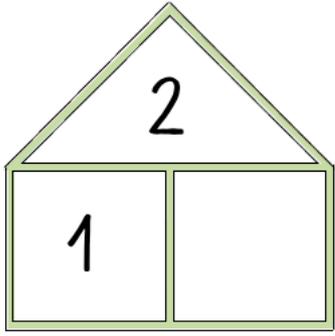
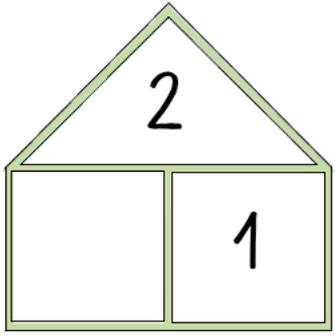
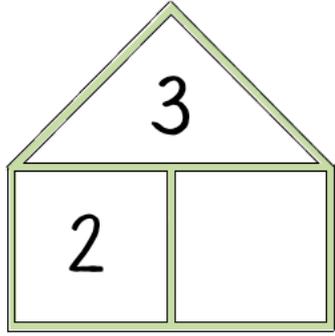
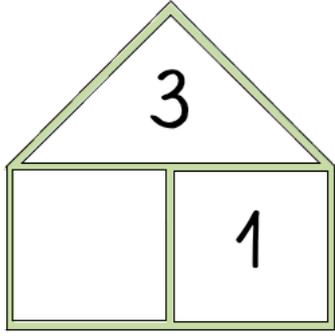
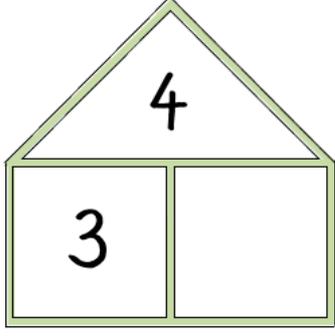
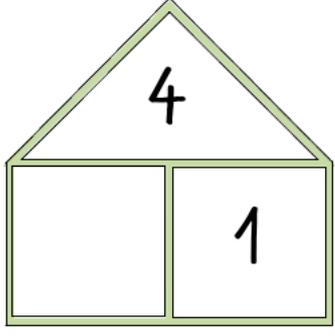
<p>House diagram: 10 in the roof, 0 in the left box, 10 in the right box. Ten-frame: 10 red dots in the top row.</p>	<p>House diagram: 10 in the roof, 10 in the left box, 0 in the right box. Ten-frame: 10 red dots in the top row.</p>
<p>House diagram: 10 in the roof, 1 in the left box, 9 in the right box. Ten-frame: 10 red dots in the top row.</p>	<p>House diagram: 10 in the roof, 9 in the left box, 1 in the right box. Ten-frame: 10 red dots in the top row.</p>
<p>House diagram: 10 in the roof, 2 in the left box, 8 in the right box. Ten-frame: 10 red dots in the top row.</p>	<p>House diagram: 10 in the roof, 8 in the left box, 2 in the right box. Ten-frame: 10 red dots in the top row.</p>
<p>House diagram: 10 in the roof, 3 in the left box, 7 in the right box. Ten-frame: 10 red dots in the top row.</p>	<p>House diagram: 10 in the roof, 7 in the left box, 3 in the right box. Ten-frame: 10 red dots in the top row.</p>

 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room contains the number 4, and the right room is empty.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room is empty, and the right room contains the number 6.</p>
 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room contains the number 5, and the right room is empty.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room is empty, and the right room contains the number 5.</p>

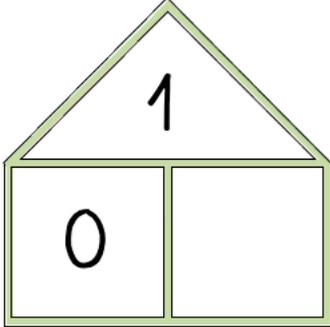
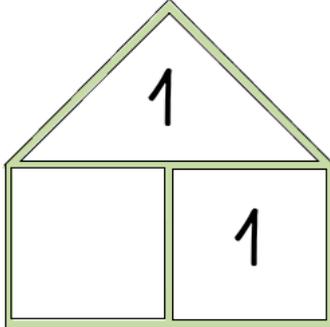
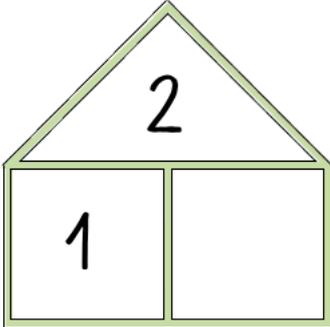
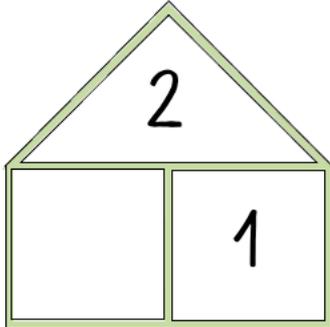
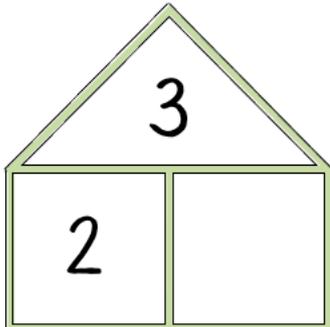
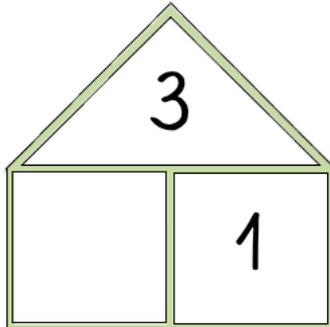
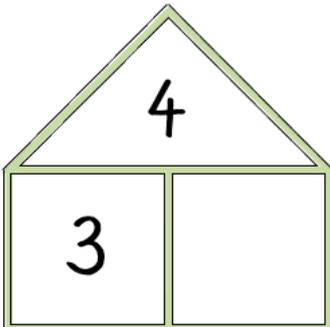
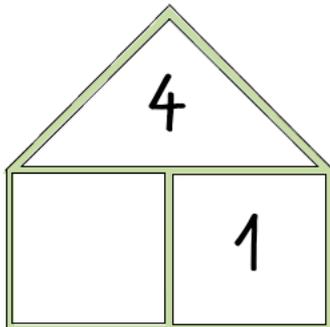
The image displays four ten-frame diagrams arranged in a 2x2 grid, each enclosed in a dashed border. Each diagram consists of a house-shaped structure above a ten-frame. The house has a triangular roof containing the number '10' and a rectangular base divided into two equal square sections. Below the house is a ten-frame with a vertical blue line down the center, separating it into two groups of five cells. The top row of the ten-frame contains ten red circles, and the bottom row is empty.

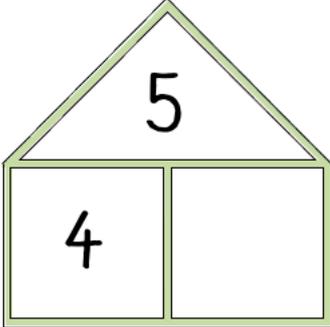
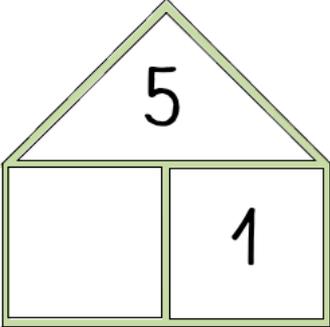
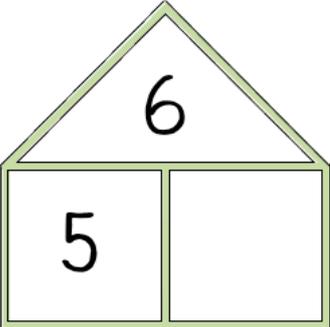
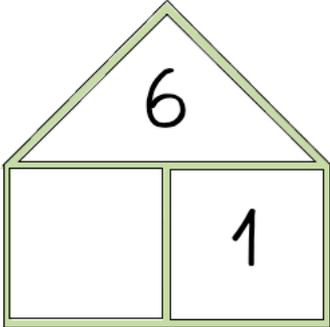
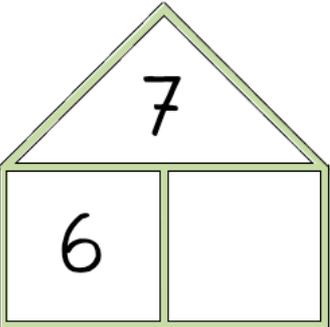
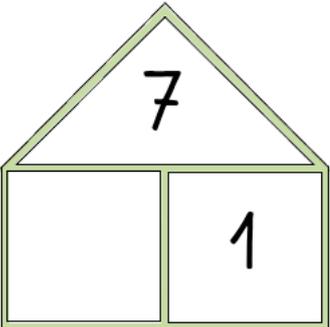
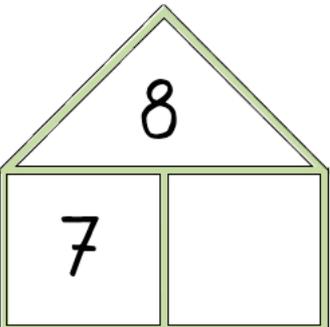
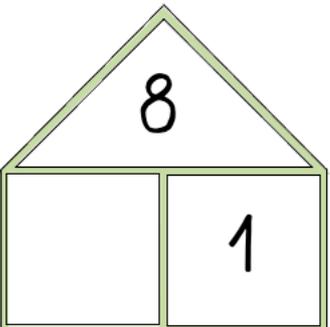
- Top-left diagram:** The house's left section contains the number '4' and the right section contains the number '6'. The ten-frame has four red circles in the left group and six red circles in the right group.
- Top-right diagram:** The house's left section contains the number '4' and the right section contains the number '6'. The ten-frame has four red circles in the left group and six red circles in the right group.
- Bottom-left diagram:** The house's left section contains the number '5' and the right section contains the number '5'. The ten-frame has five red circles in the left group and five red circles in the right group.
- Bottom-right diagram:** The house's left section contains the number '5' and the right section contains the number '5'. The ten-frame has five red circles in the left group and five red circles in the right group.

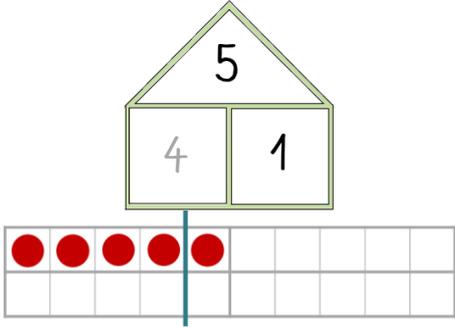
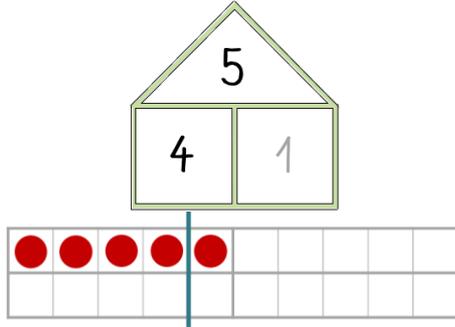
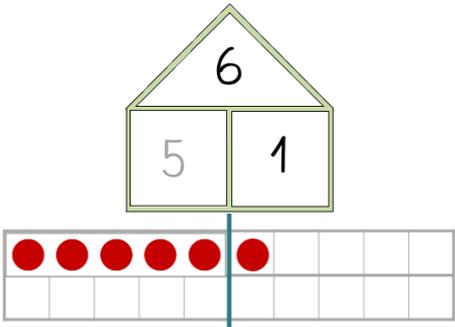
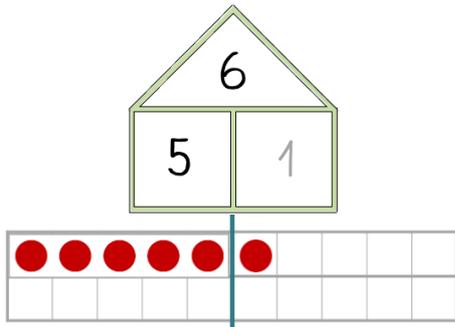
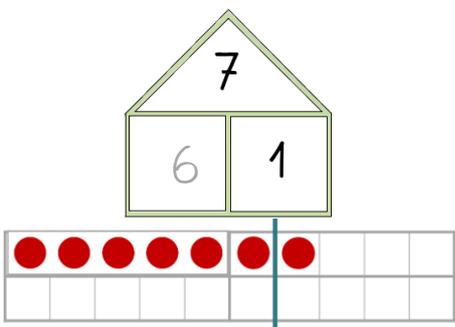
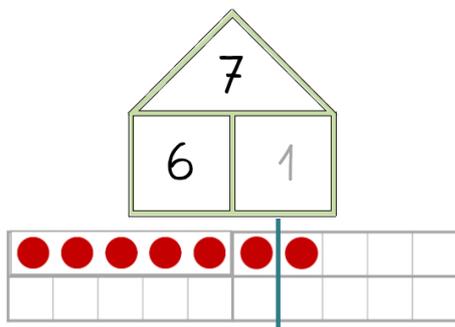
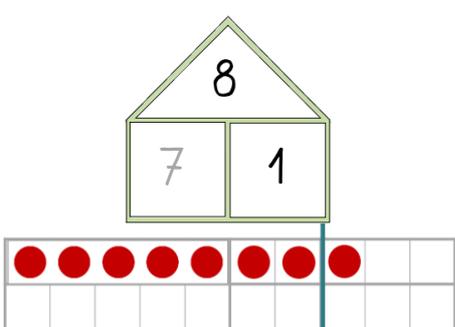
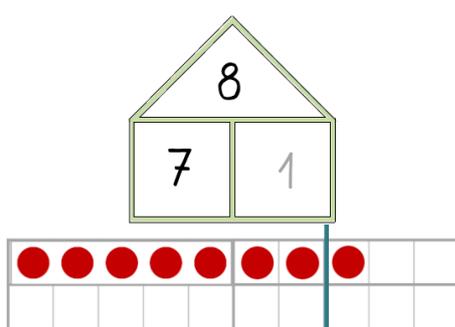
## 7 Zerlegungen mit 1

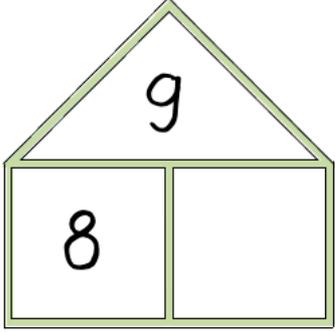
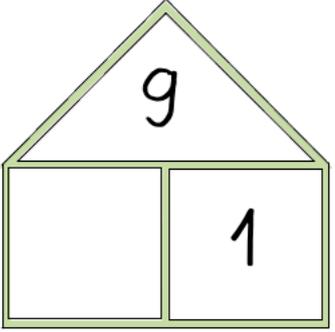
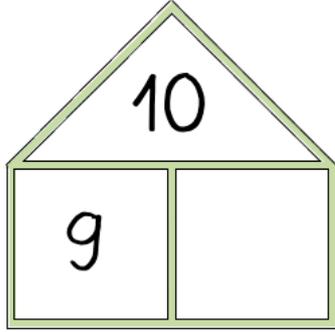
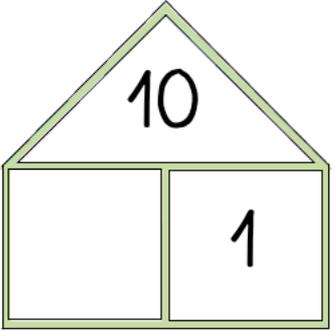
	
	
	
	

## 7 Zerlegungen mit 1

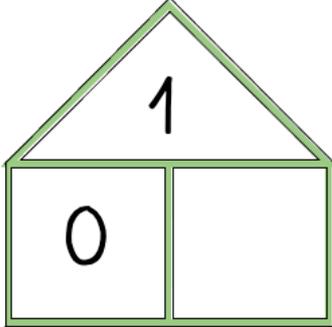
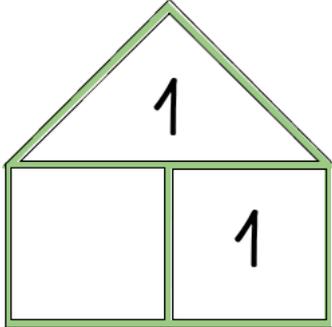
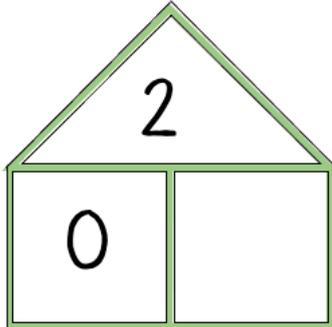
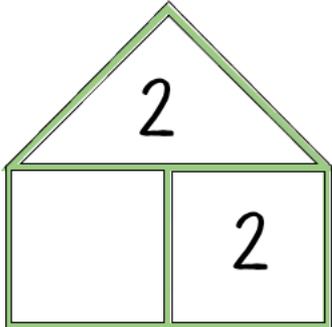
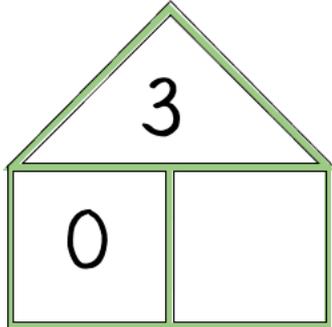
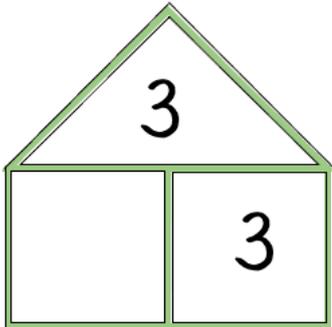
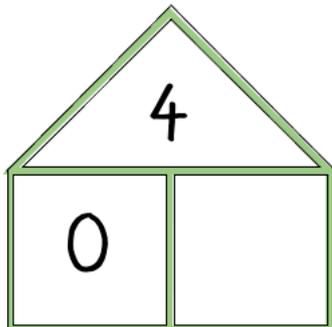
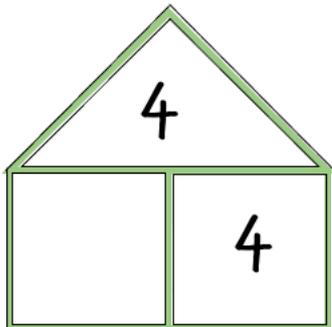
 <p>1 0</p>	 <p>1 1</p>
 <p>2 1</p>	 <p>2 1</p>
 <p>3 2</p>	 <p>3 1</p>
 <p>4 3</p>	 <p>4 1</p>

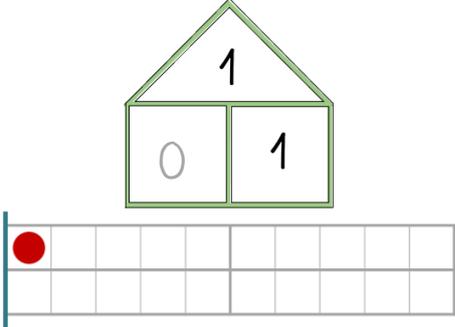
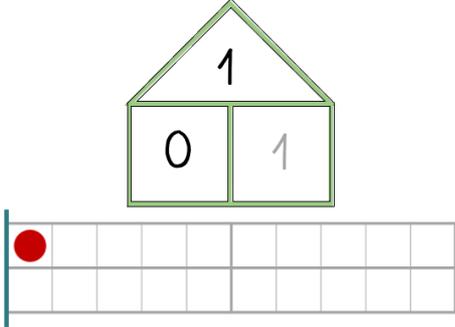
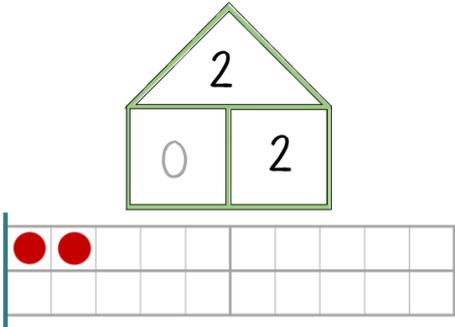
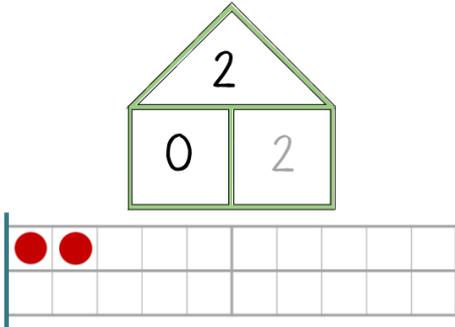
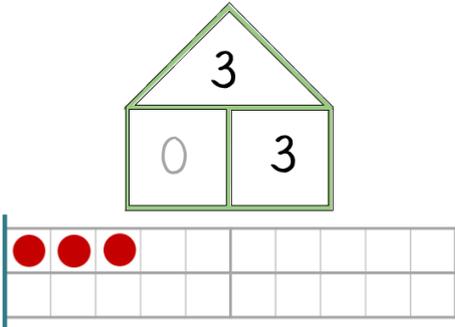
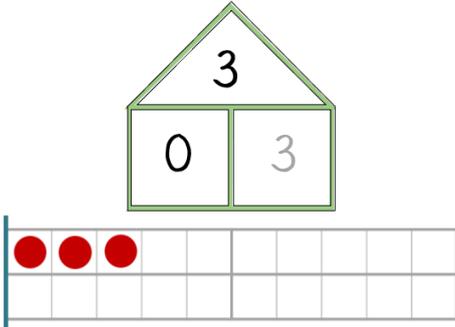
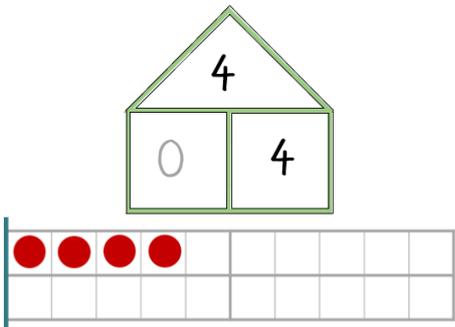
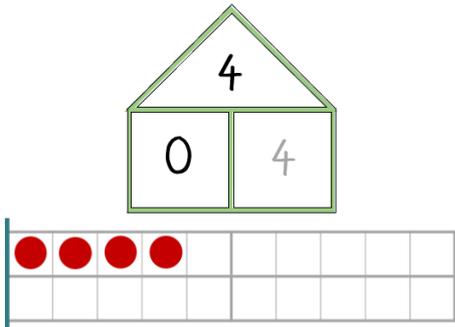

	
	
	
	

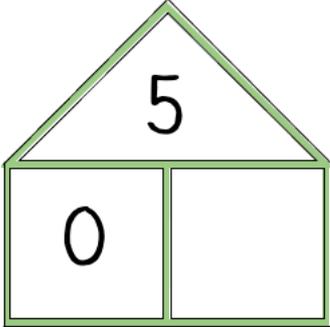
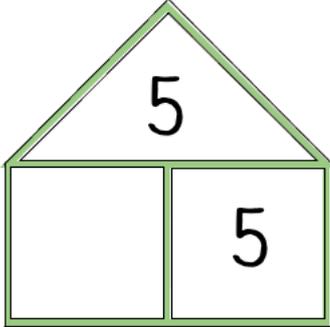
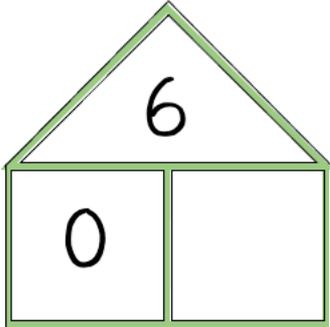
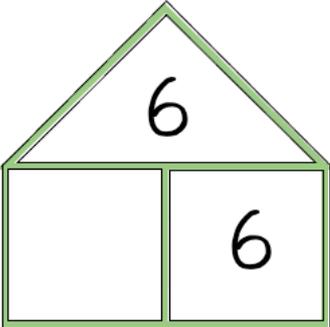
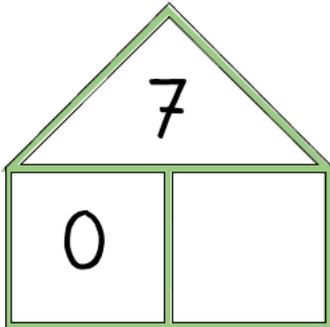
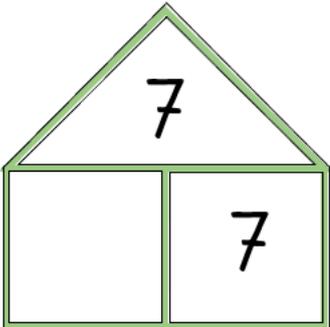
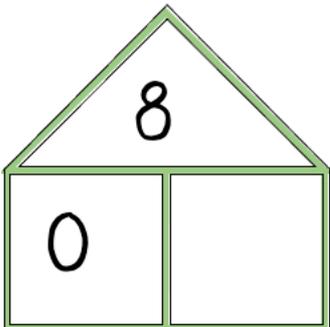
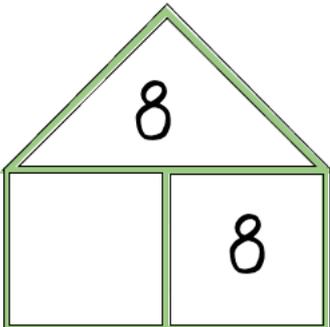
 <p>A house-shaped number 5. The roof contains the number 5. The base is split into two boxes containing 4 and 1. Below is a ten-frame with a vertical line at the 5th position, containing 5 red dots.</p>	 <p>A house-shaped number 5. The roof contains the number 5. The base is split into two boxes containing 4 and 1. Below is a ten-frame with a vertical line at the 5th position, containing 5 red dots.</p>
 <p>A house-shaped number 6. The roof contains the number 6. The base is split into two boxes containing 5 and 1. Below is a ten-frame with a vertical line at the 6th position, containing 6 red dots.</p>	 <p>A house-shaped number 6. The roof contains the number 6. The base is split into two boxes containing 5 and 1. Below is a ten-frame with a vertical line at the 6th position, containing 6 red dots.</p>
 <p>A house-shaped number 7. The roof contains the number 7. The base is split into two boxes containing 6 and 1. Below is a ten-frame with a vertical line at the 7th position, containing 7 red dots.</p>	 <p>A house-shaped number 7. The roof contains the number 7. The base is split into two boxes containing 6 and 1. Below is a ten-frame with a vertical line at the 7th position, containing 7 red dots.</p>
 <p>A house-shaped number 8. The roof contains the number 8. The base is split into two boxes containing 7 and 1. Below is a ten-frame with a vertical line at the 8th position, containing 8 red dots.</p>	 <p>A house-shaped number 8. The roof contains the number 8. The base is split into two boxes containing 7 and 1. Below is a ten-frame with a vertical line at the 8th position, containing 8 red dots.</p>

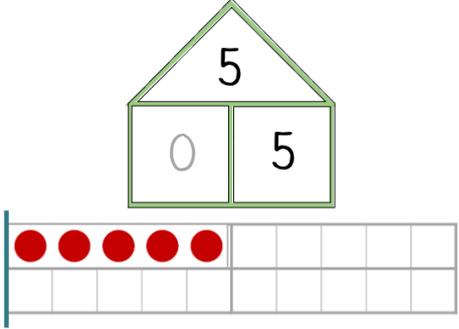
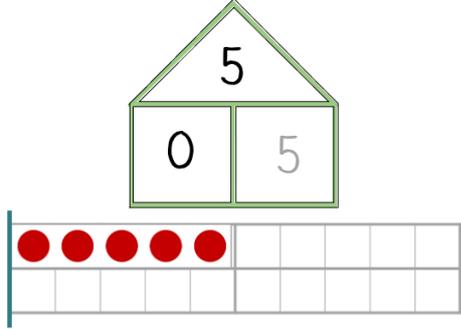
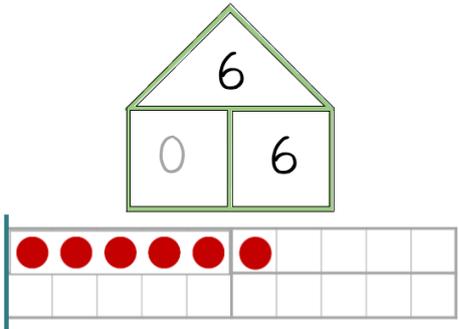
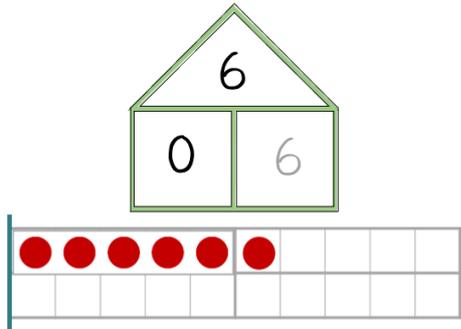
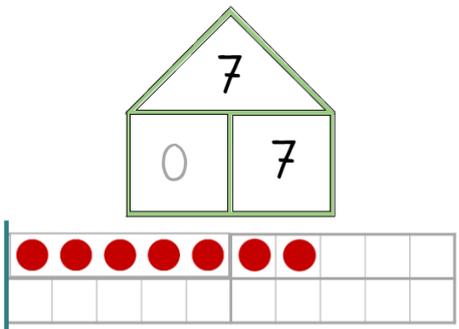
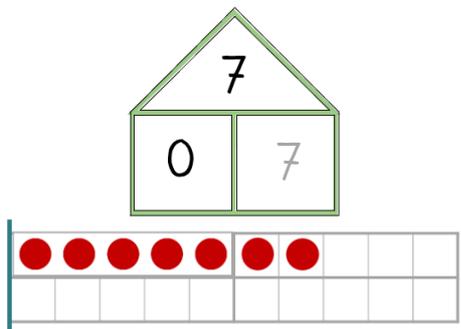
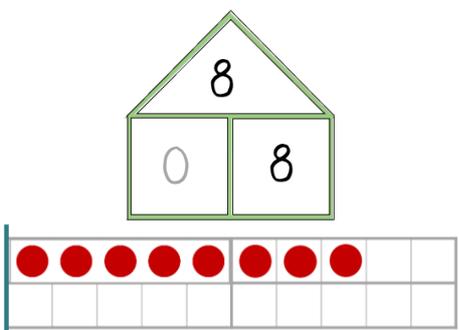
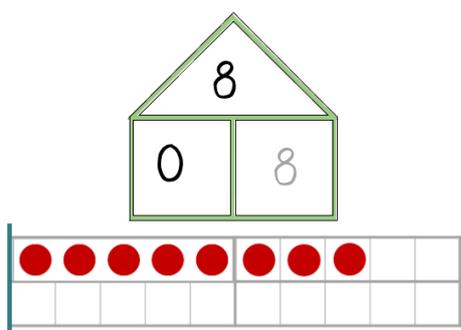
 <p>A house-shaped diagram with a triangular roof containing the number 9. Below the roof is a rectangular base divided into two equal boxes. The left box contains the number 8, and the right box is empty.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 9. Below the roof is a rectangular base divided into two equal boxes. The left box is empty, and the right box contains the number 1.</p>
 <p>A house-shaped diagram with a triangular roof containing the number 10. Below the roof is a rectangular base divided into two equal boxes. The left box contains the number 9, and the right box is empty.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 10. Below the roof is a rectangular base divided into two equal boxes. The left box is empty, and the right box contains the number 1.</p>

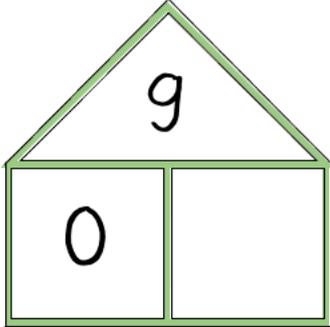
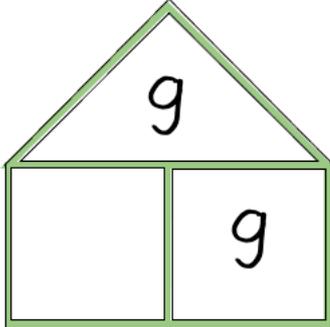
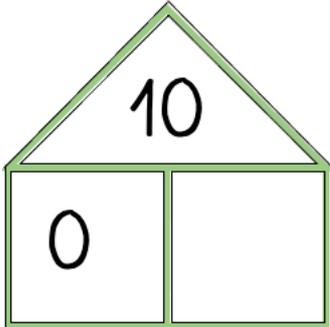
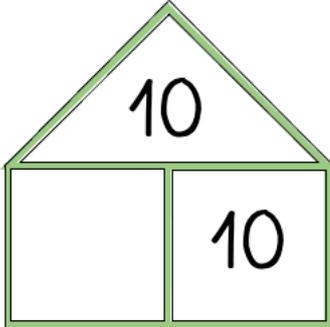

## 8 Zerlegungen mit 0

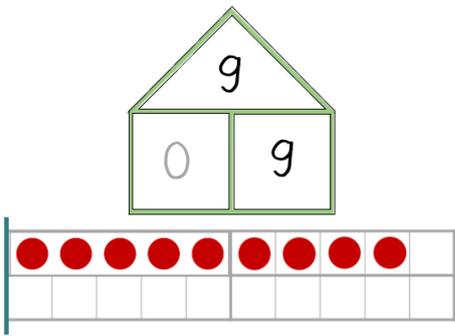
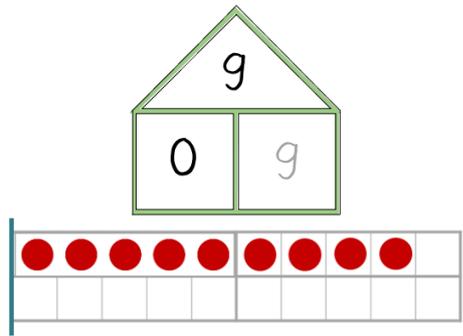
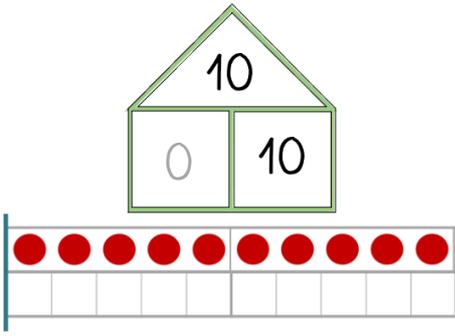
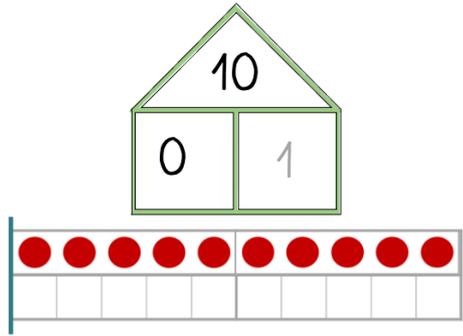
	
	
	
	

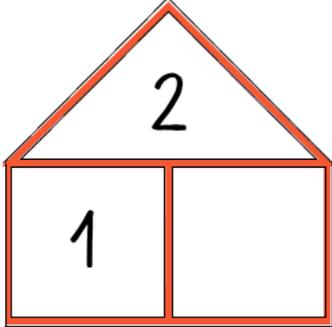
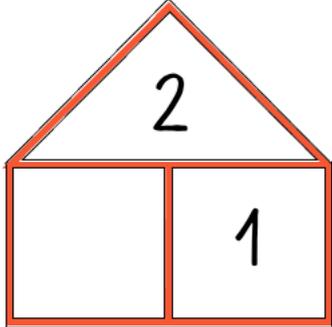
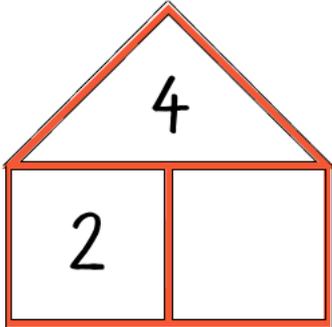
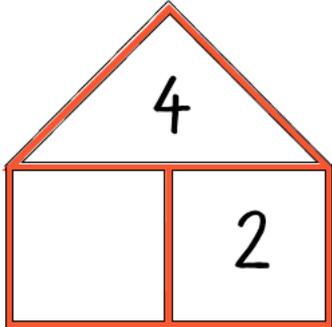
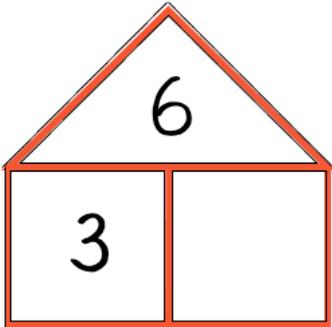
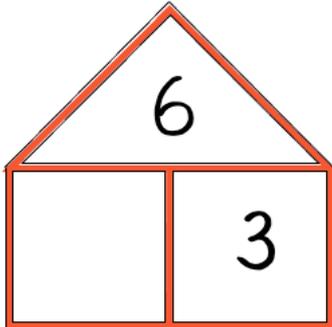
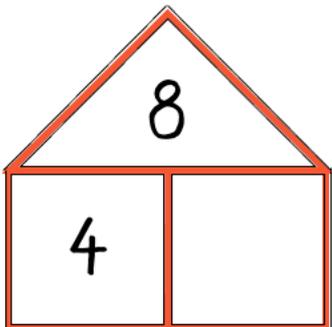
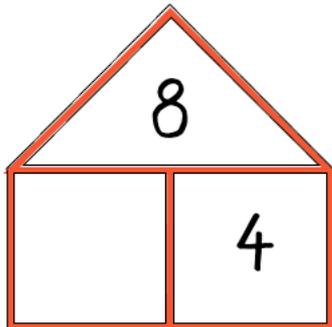
	
	
	
	

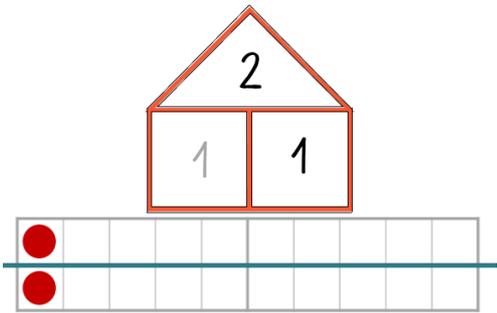
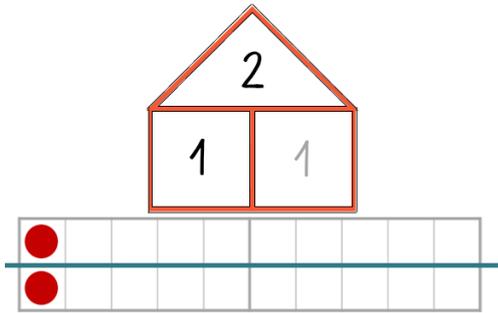
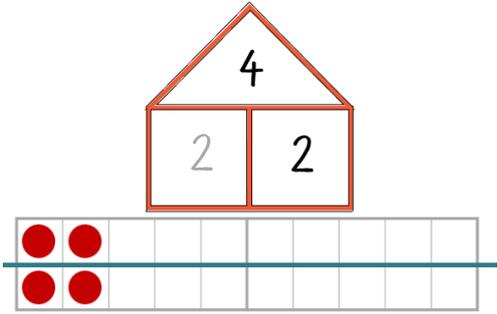
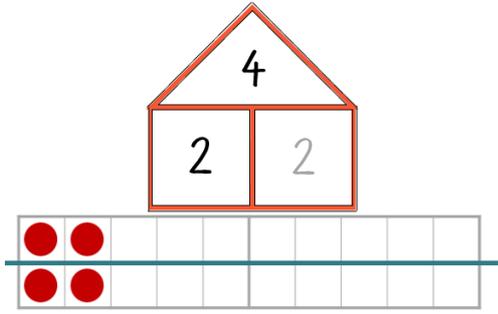
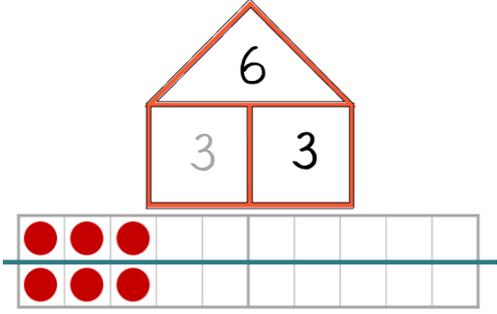
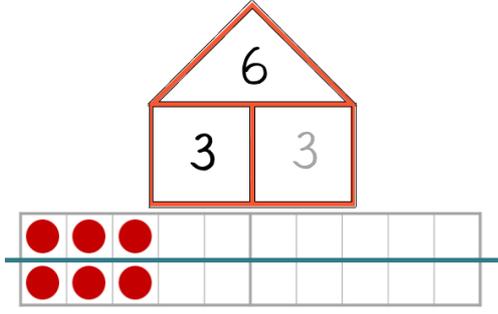
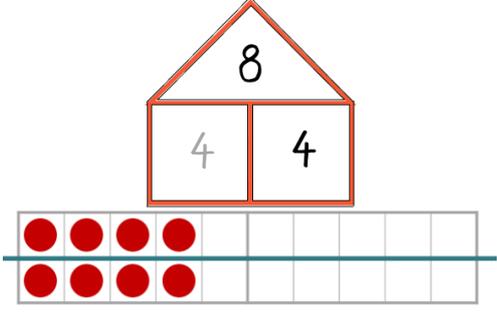
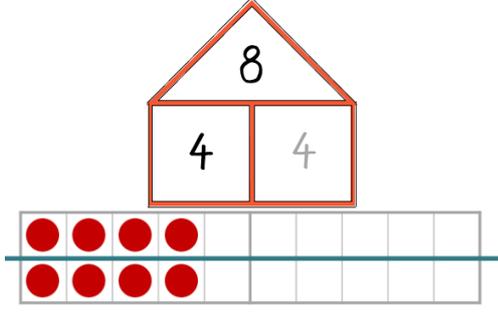
	
	
	
	

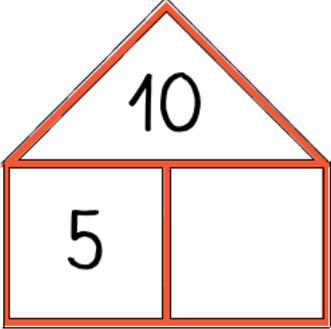
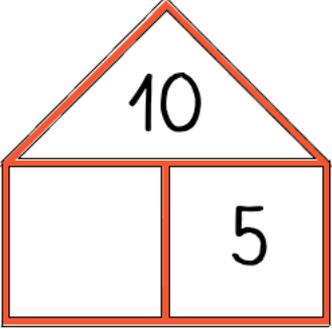
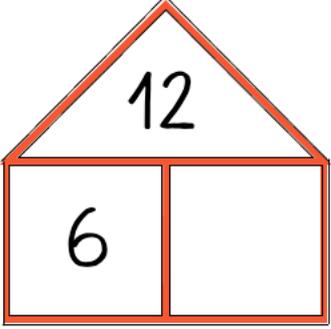
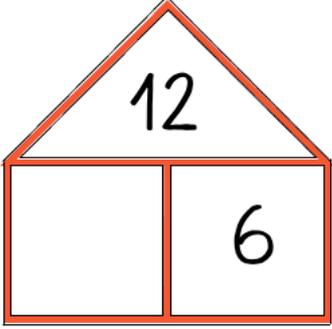
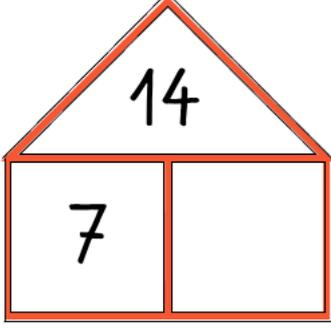
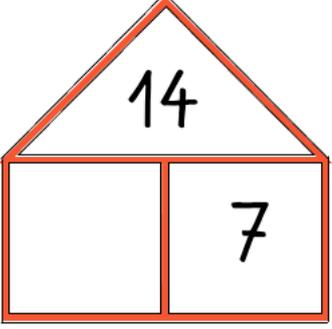
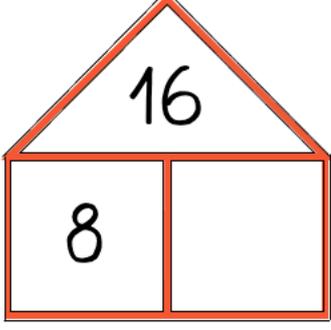
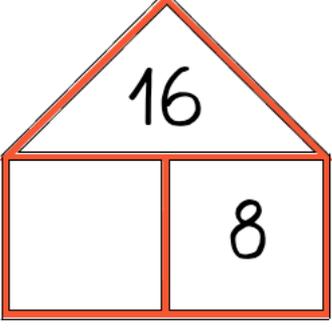
	
	

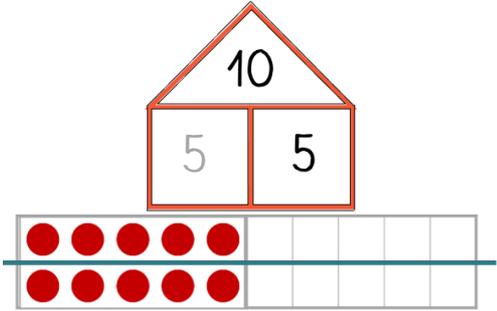
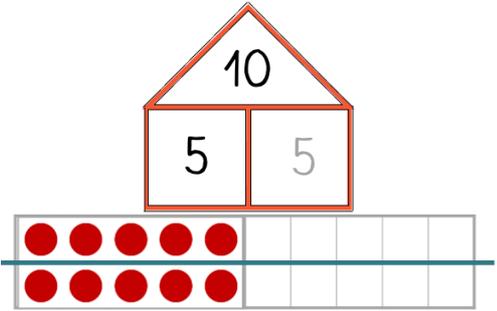
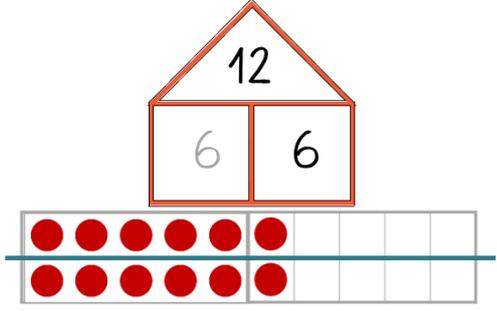
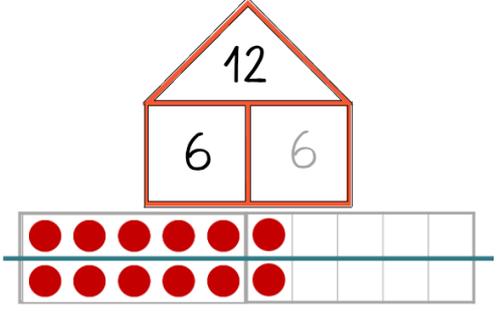
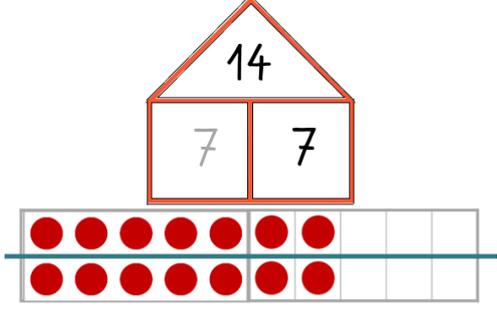
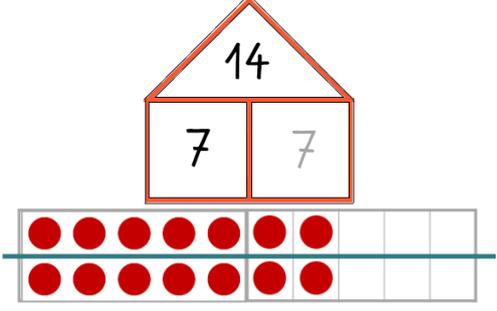
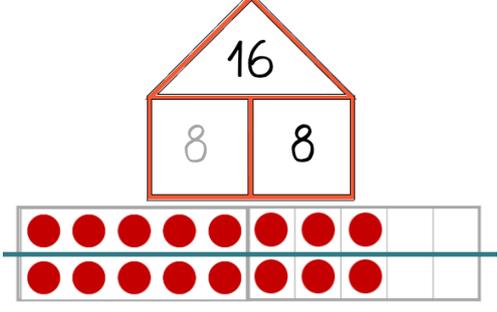
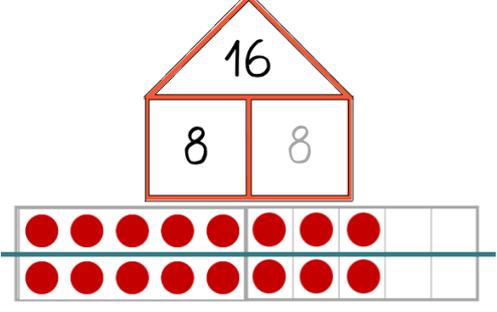
	
	

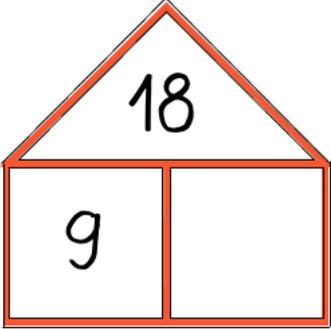
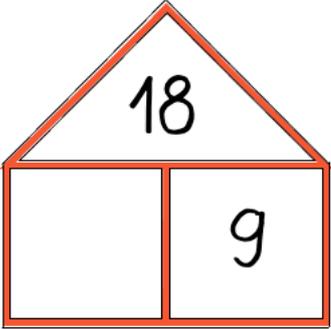
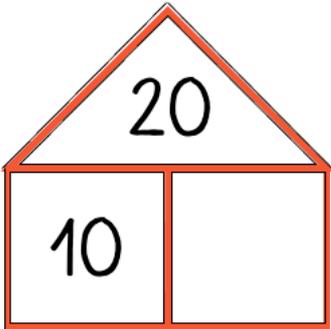
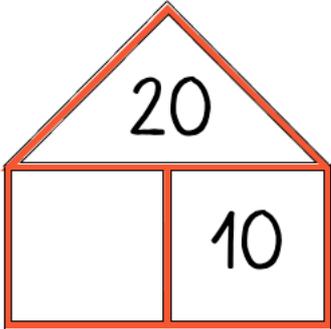
## 9 Zerlegungen in zwei gleiche Hälften

 <p>A house-shaped number 2. The roof contains the number 2. The base is divided into two equal parts, each containing the number 1. Below the house is a ten-frame with a horizontal line. Two red dots are placed in the first two positions of the top row.</p>	 <p>A house-shaped number 2. The roof contains the number 2. The base is divided into two equal parts, each containing the number 1. Below the house is a ten-frame with a horizontal line. Two red dots are placed in the first two positions of the top row.</p>
 <p>A house-shaped number 4. The roof contains the number 4. The base is divided into two equal parts, each containing the number 2. Below the house is a ten-frame with a horizontal line. Four red dots are placed in the first four positions of the top row.</p>	 <p>A house-shaped number 4. The roof contains the number 4. The base is divided into two equal parts, each containing the number 2. Below the house is a ten-frame with a horizontal line. Four red dots are placed in the first four positions of the top row.</p>
 <p>A house-shaped number 6. The roof contains the number 6. The base is divided into two equal parts, each containing the number 3. Below the house is a ten-frame with a horizontal line. Six red dots are placed in the first six positions of the top row.</p>	 <p>A house-shaped number 6. The roof contains the number 6. The base is divided into two equal parts, each containing the number 3. Below the house is a ten-frame with a horizontal line. Six red dots are placed in the first six positions of the top row.</p>
 <p>A house-shaped number 8. The roof contains the number 8. The base is divided into two equal parts, each containing the number 4. Below the house is a ten-frame with a horizontal line. Eight red dots are placed in the first eight positions of the top row.</p>	 <p>A house-shaped number 8. The roof contains the number 8. The base is divided into two equal parts, each containing the number 4. Below the house is a ten-frame with a horizontal line. Eight red dots are placed in the first eight positions of the top row.</p>

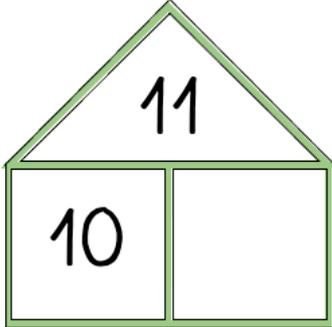
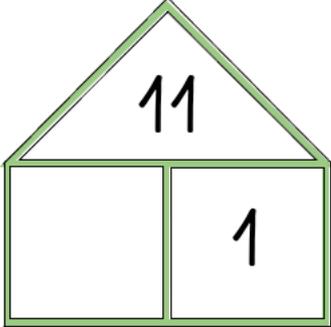
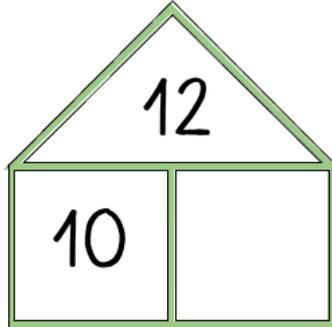
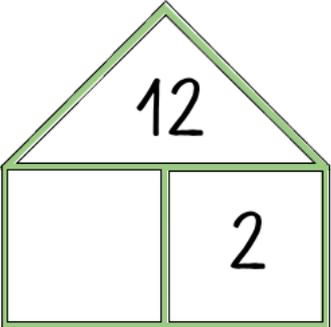
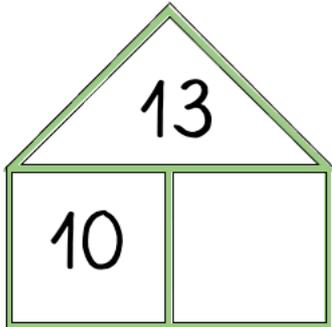
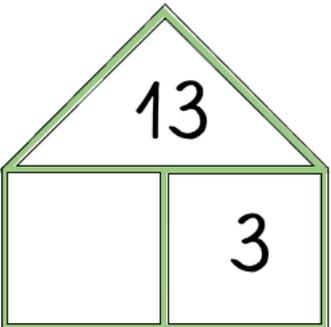
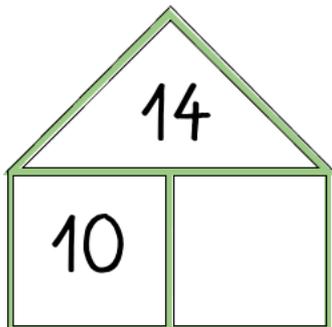
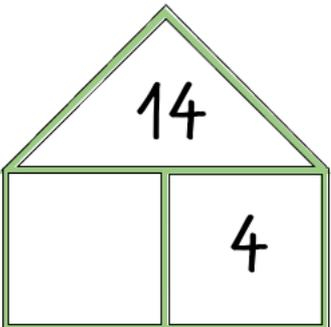
 <p>A house-shaped number 10. The roof contains the number 10. The main body is divided into two equal halves, each containing the number 5. Below the house is a ten-frame with two rows of five cells. The first five cells in each row are filled with red dots, representing the number 10.</p>	 <p>A house-shaped number 10. The roof contains the number 10. The main body is divided into two equal halves, each containing the number 5. Below the house is a ten-frame with two rows of five cells. The first five cells in each row are filled with red dots, representing the number 10.</p>
 <p>A house-shaped number 12. The roof contains the number 12. The main body is divided into two equal halves, each containing the number 6. Below the house is a ten-frame with two rows of five cells. The first six cells in each row are filled with red dots, representing the number 12.</p>	 <p>A house-shaped number 12. The roof contains the number 12. The main body is divided into two equal halves, each containing the number 6. Below the house is a ten-frame with two rows of five cells. The first six cells in each row are filled with red dots, representing the number 12.</p>
 <p>A house-shaped number 14. The roof contains the number 14. The main body is divided into two equal halves, each containing the number 7. Below the house is a ten-frame with two rows of five cells. The first seven cells in each row are filled with red dots, representing the number 14.</p>	 <p>A house-shaped number 14. The roof contains the number 14. The main body is divided into two equal halves, each containing the number 7. Below the house is a ten-frame with two rows of five cells. The first seven cells in each row are filled with red dots, representing the number 14.</p>
 <p>A house-shaped number 16. The roof contains the number 16. The main body is divided into two equal halves, each containing the number 8. Below the house is a ten-frame with two rows of five cells. The first eight cells in each row are filled with red dots, representing the number 16.</p>	 <p>A house-shaped number 16. The roof contains the number 16. The main body is divided into two equal halves, each containing the number 8. Below the house is a ten-frame with two rows of five cells. The first eight cells in each row are filled with red dots, representing the number 16.</p>

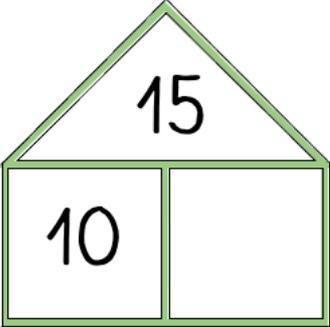
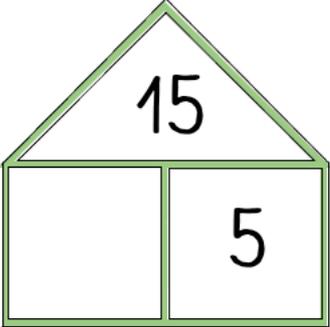
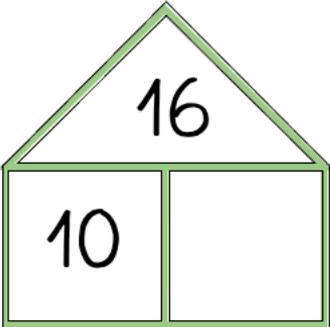
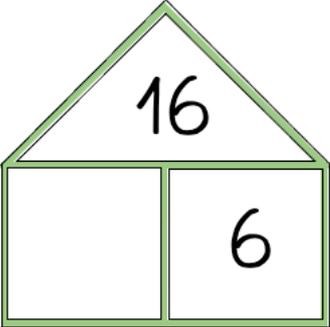
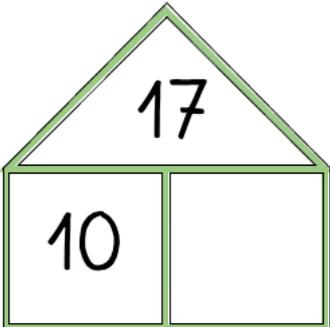
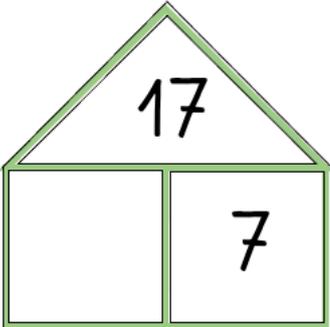
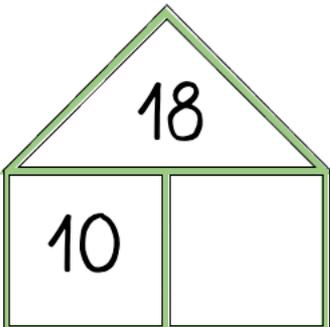
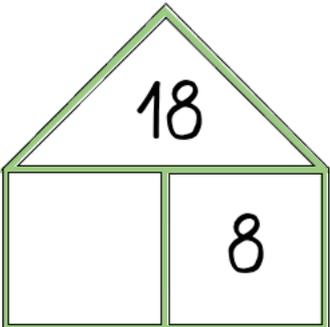
	
	

The image displays four place value charts arranged in a 2x2 grid. Each chart consists of a house-shaped diagram above a ten-frame. The top row shows the number 18, and the bottom row shows the number 20. Each house diagram has a triangle at the top containing the number and a rectangle below divided into two boxes for tens and ones. The ten-frame below has two rows of five cells each, with a horizontal line separating the rows. Red dots are used to represent the value of each number.

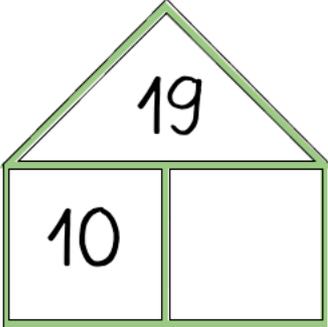
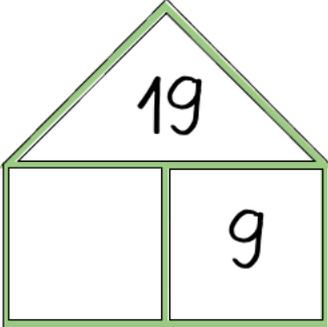
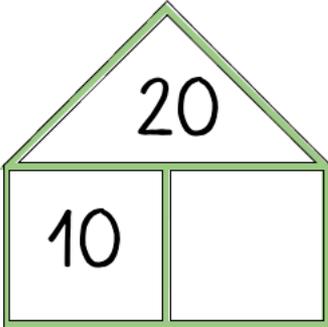
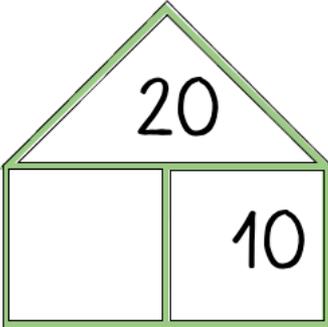
Number	Tens	Ones	Total
18	10	8	18
20	20	0	20

## 10 Zerlegungen mit 10

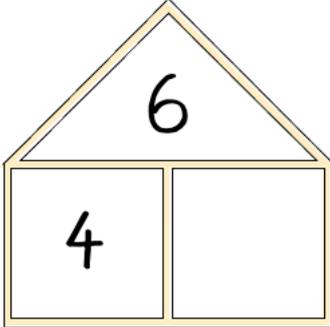
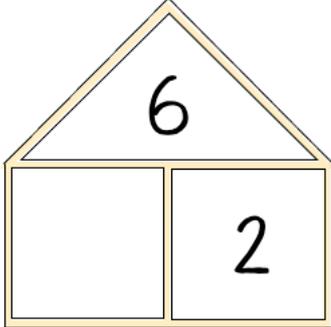
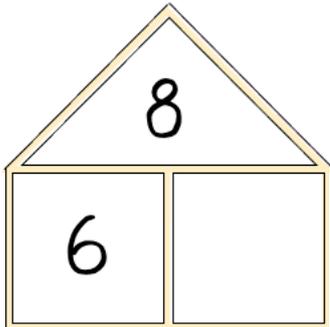
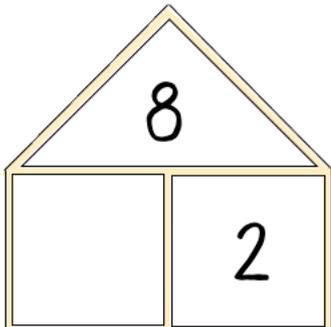
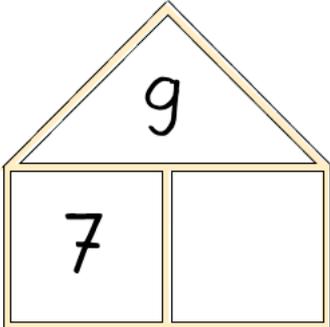
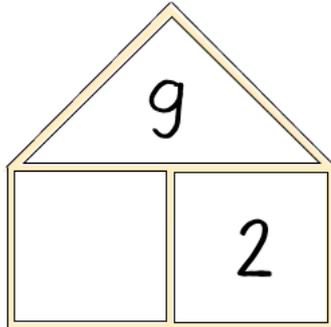
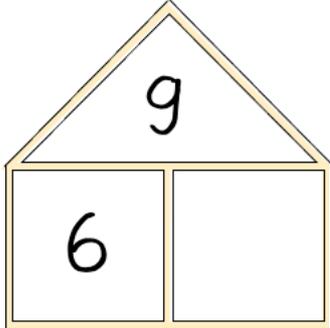
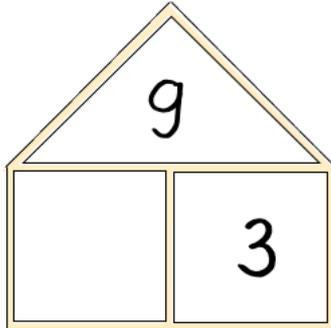
<p>15</p> <p>1 5</p>	<p>15</p> <p>10 5</p>
<p>16</p> <p>1 6</p>	<p>16</p> <p>10 6</p>
<p>17</p> <p>1 7</p>	<p>17</p> <p>10 7</p>
<p>18</p> <p>1 8</p>	<p>18</p> <p>10 8</p>

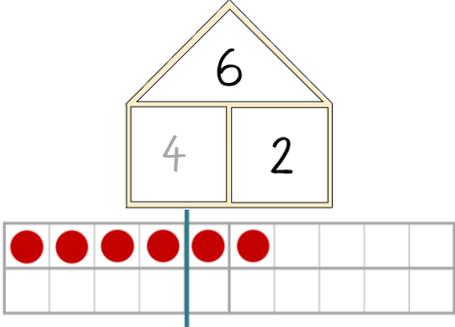
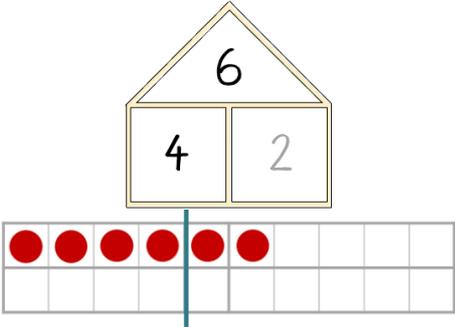
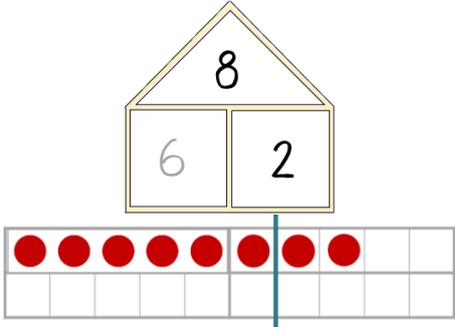
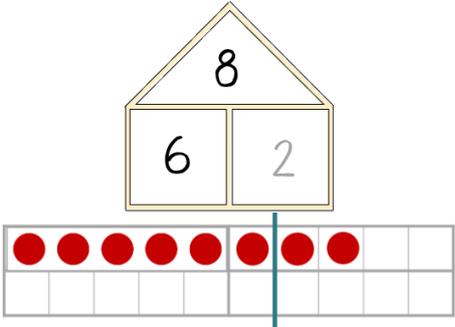
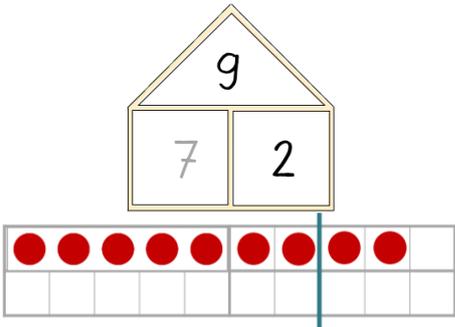
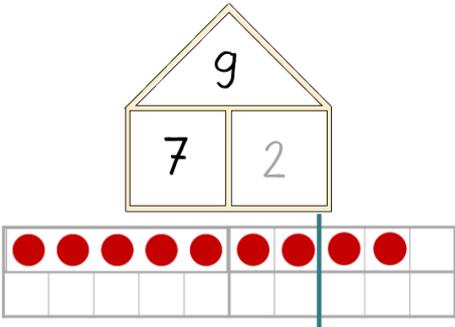
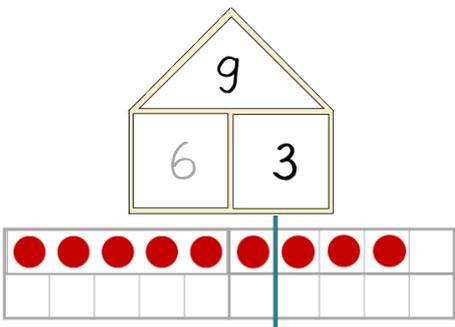
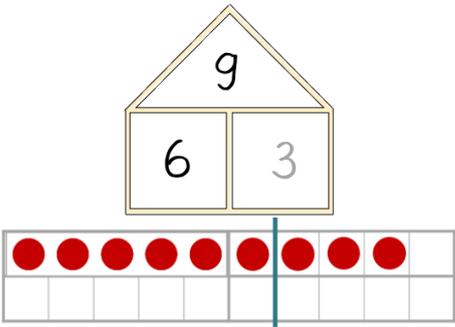
	
	

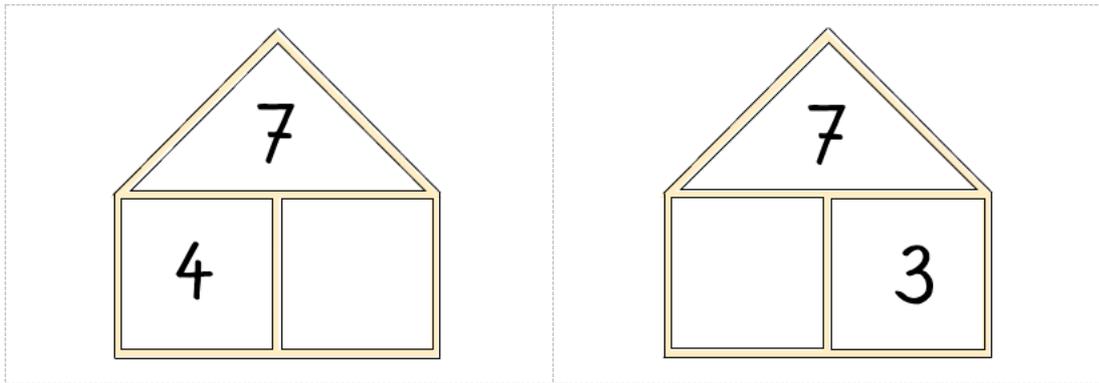
The image displays four place value charts arranged in a 2x2 grid. Each chart consists of a ten-frame (a rectangle divided into two columns of five) and a ten-rod (a horizontal bar divided into ten equal segments) positioned below it. A blue horizontal line is drawn across the middle of each ten-rod. Above each ten-frame is a house-shaped structure with a triangular roof and a rectangular base. The roof contains the number being represented, and the base is divided into two boxes representing the tens and ones places.

- Top-left chart:** The number 19 is written in the roof. The tens box contains '10' and the ones box contains '9'. The ten-rod has 19 red dots: 10 in the left column and 9 in the right column.
- Top-right chart:** The number 19 is written in the roof. The tens box contains '10' and the ones box contains '9'. The ten-rod has 19 red dots: 10 in the left column and 9 in the right column.
- Bottom-left chart:** The number 20 is written in the roof. The tens box contains '10' and the ones box contains '10'. The ten-rod has 20 red dots: 10 in the left column and 10 in the right column.
- Bottom-right chart:** The number 20 is written in the roof. The tens box contains '10' and the ones box contains '10'. The ten-rod has 20 red dots: 10 in the left column and 10 in the right column.

## 11 Schwierige Zerlegungen

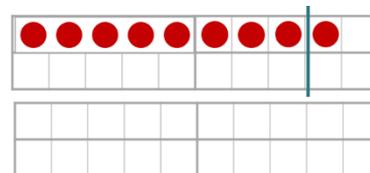
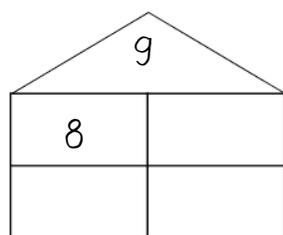
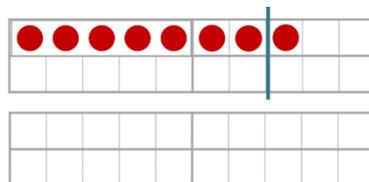
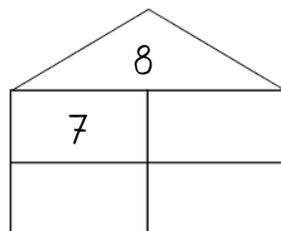
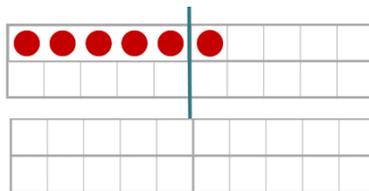
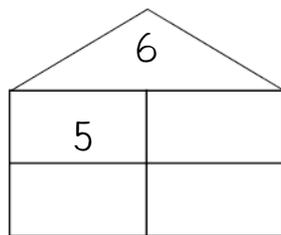
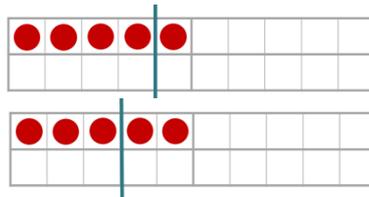
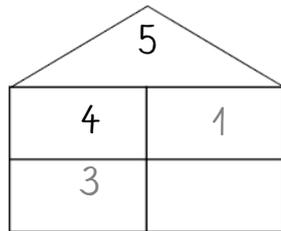
 <p>A house-shaped number 6. The roof contains the number 6. The body is divided into two rooms: the left room contains the number 4 and the right room contains the number 2. Below the house is a ten-frame with a vertical line after the 5th cell. The first 6 cells of the ten-frame contain red dots.</p>	 <p>A house-shaped number 6. The roof contains the number 6. The body is divided into two rooms: the left room contains the number 4 and the right room contains the number 2. Below the house is a ten-frame with a vertical line after the 5th cell. The first 6 cells of the ten-frame contain red dots.</p>
 <p>A house-shaped number 8. The roof contains the number 8. The body is divided into two rooms: the left room contains the number 6 and the right room contains the number 2. Below the house is a ten-frame with a vertical line after the 5th cell. The first 8 cells of the ten-frame contain red dots.</p>	 <p>A house-shaped number 8. The roof contains the number 8. The body is divided into two rooms: the left room contains the number 6 and the right room contains the number 2. Below the house is a ten-frame with a vertical line after the 5th cell. The first 8 cells of the ten-frame contain red dots.</p>
 <p>A house-shaped number 9. The roof contains the number 9. The body is divided into two rooms: the left room contains the number 7 and the right room contains the number 2. Below the house is a ten-frame with a vertical line after the 5th cell. The first 9 cells of the ten-frame contain red dots.</p>	 <p>A house-shaped number 9. The roof contains the number 9. The body is divided into two rooms: the left room contains the number 7 and the right room contains the number 2. Below the house is a ten-frame with a vertical line after the 5th cell. The first 9 cells of the ten-frame contain red dots.</p>
 <p>A house-shaped number 9. The roof contains the number 9. The body is divided into two rooms: the left room contains the number 6 and the right room contains the number 3. Below the house is a ten-frame with a vertical line after the 5th cell. The first 9 cells of the ten-frame contain red dots.</p>	 <p>A house-shaped number 9. The roof contains the number 9. The body is divided into two rooms: the left room contains the number 6 and the right room contains the number 3. Below the house is a ten-frame with a vertical line after the 5th cell. The first 9 cells of the ten-frame contain red dots.</p>



The image shows two identical exercises for practicing place value. Each exercise consists of a house-shaped diagram and a ten-frame below it. The house has a triangular roof containing the number 7. Below the roof are two rectangular windows: the left window contains the number 4 and the right window contains the number 3. Below the house is a ten-frame (a 2x10 grid). The top row of the ten-frame contains 7 red dots, and a vertical blue line is drawn between the 4th and 5th columns. The bottom row of the ten-frame is empty.

## Schwierige Zerlegungen erkunden A

Zerlegungen mit 1 kennst du schon. Lege sie mit dem Zwanzigerfeld. Verschiebe den Zerlegestrich. Wie heißt die neue Zerlegung? Zeichne ein.



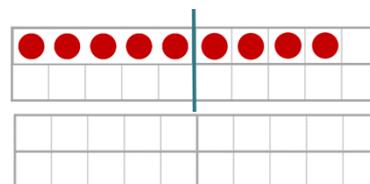
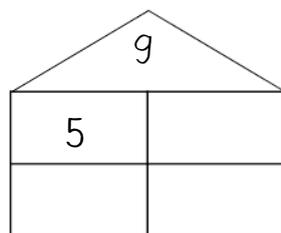
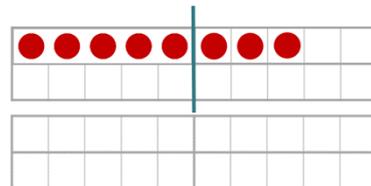
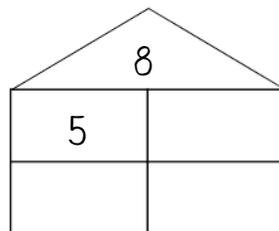
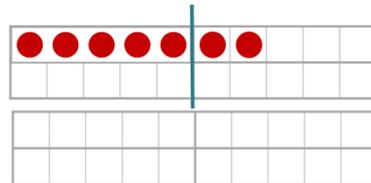
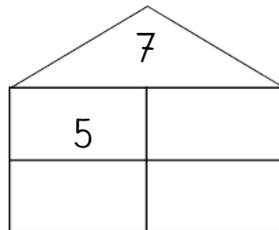
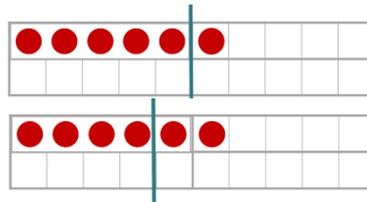
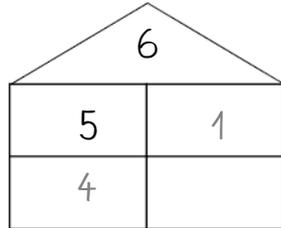
a) Was fällt dir auf? Markiere mit Forschermitteln.



b) Triff dich mit deinem Partnerkind. Beschreibt euch gegenseitig eure Entdeckungen. Begründet sie mit den Zwanzigerfeldern.

## Schwierige Zerlegungen erkunden B

Zerlegungen mit 5 kennst du schon. Lege sie mit dem Zwanzigerfeld. Verschiebe den Zerlegestrich. Wie heißt die neue Zerlegung? Zeichne ein.



a) Was fällt dir auf? Markiere mit Forschermitteln.



b) Triff dich mit deinem Partnerkind. Beschreibt euch gegenseitig eure Entdeckungen. Begründet sie mit den Zwanzigerfeldern.