

Arbeitsmaterial

Zahlzerlegungen und Zahlzusammensetzungen automatisieren und üben im Zahlenraum bis 20

Lena Maiß, Heike Buddenberg, Sophie Mense, Franziska Tilke & Karina Höveler

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 zugänglich 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).

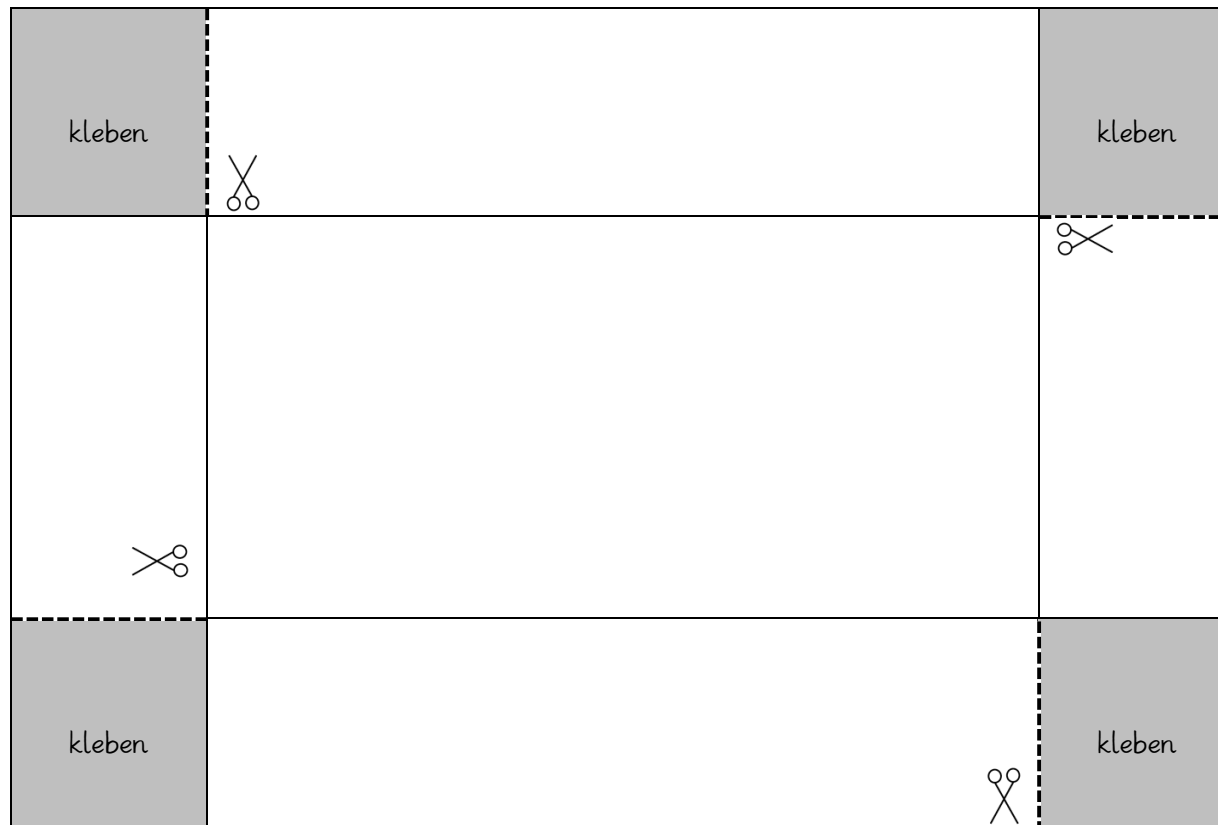
Hinweis zu verwandtem Material

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

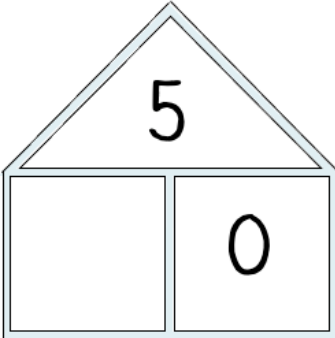
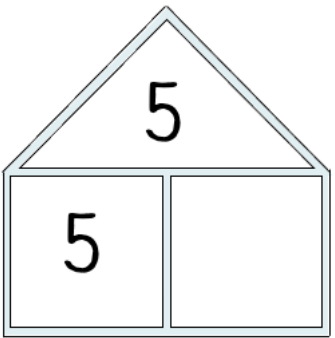
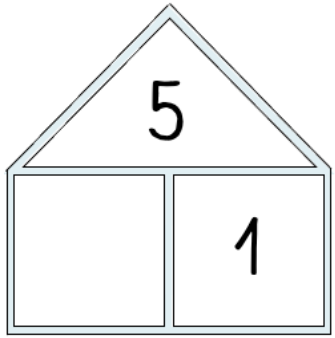
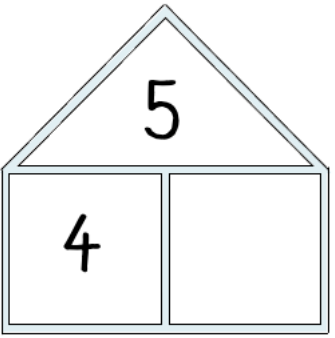
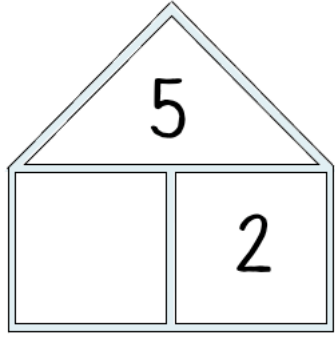
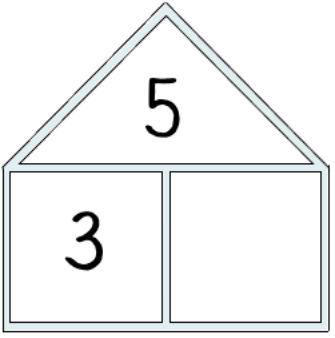
- 1 Strategiegruppe: Zerlegungen von 5 (Fingerbild)
- 2 Strategiegruppe: Zerlegungen von 5 (Zwanzigerfeld)
- 3 Strategiegruppe: Zerlegungen mit 5 (Fingerbild)
- 4 Strategiegruppe: Zerlegungen mit 5 (Zwanzigerfeld)
- 5 Strategiegruppe: Zerlegungen von 10 (Fingerbild)
- 6 Strategiegruppe: Zerlegungen von 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

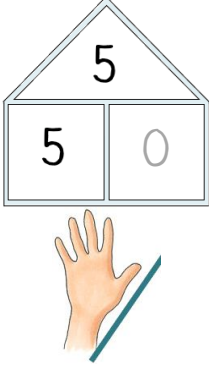
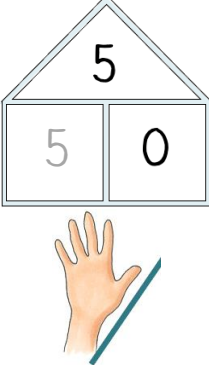
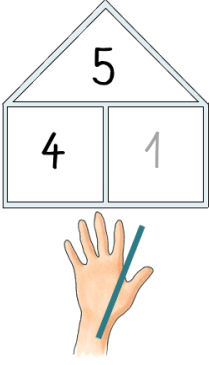
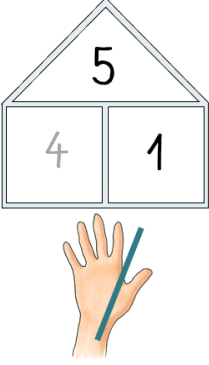
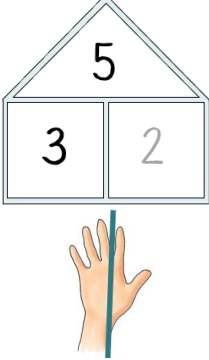
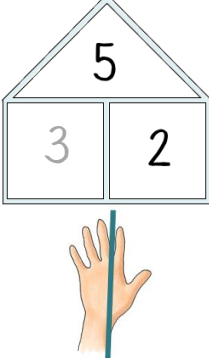
Drucken Sie die Karteikarten doppelseitig aus. Auf der Vorderseite sieht man dann die zu ergänzende Zerlegung, auf der Rückseite die Lösung und eine bildliche Erklärung.

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.

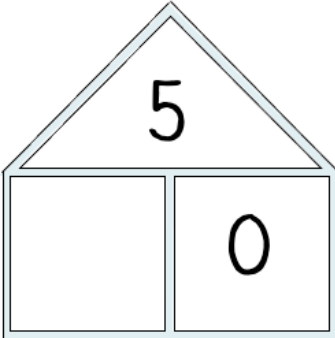
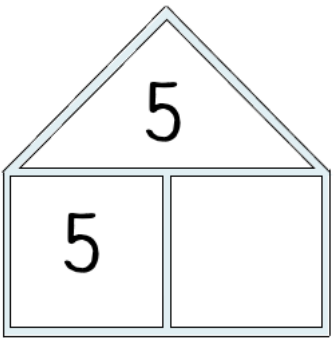
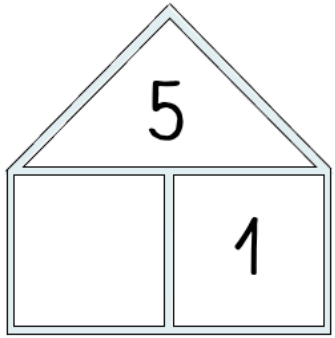
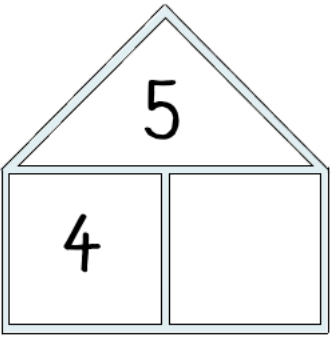
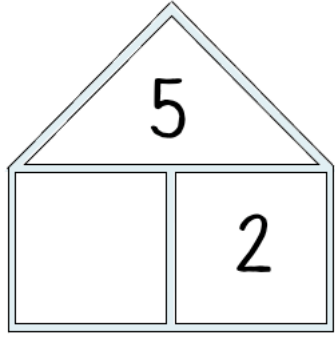
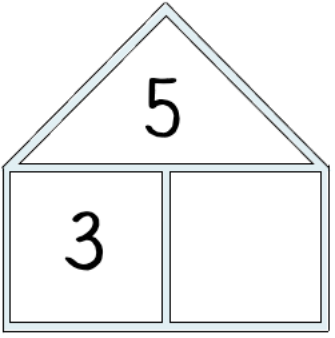
Die Hände sind im Zahlenraum bis 10 ein hilfreiches Anschauungsmittel für die Lernenden, da sie immer verfügbar sind. Die Darstellung auf dem Zwanzigerfeld ist hingegen tragfähiger bei der Erweiterung des Zahlenraums. Entscheiden Sie, welche Darstellungsweise für Ihre Lernenden zu dem jeweiligen Zeitpunkt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

1 Zerlegungen von 5 (Fingerbild)

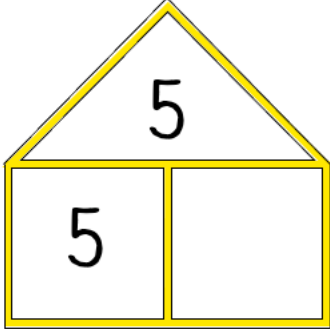
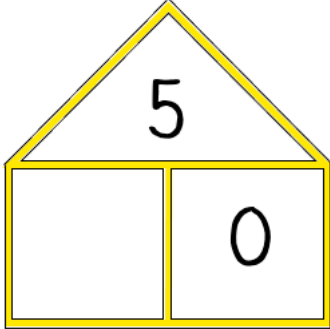
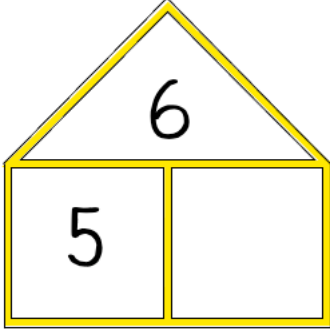
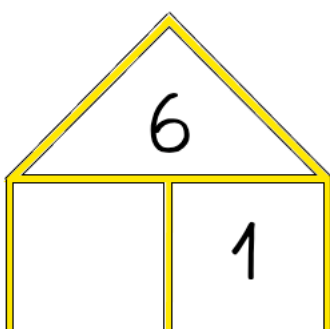
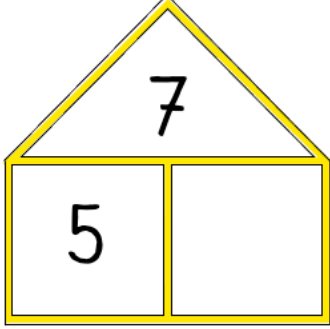
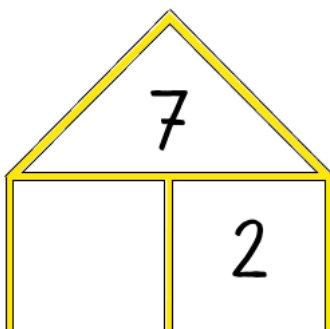
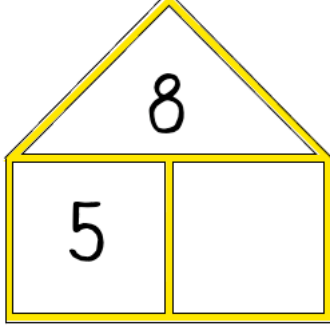
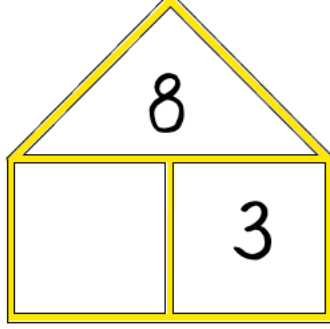
	
	
	

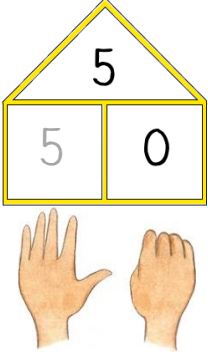
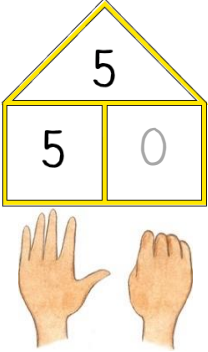
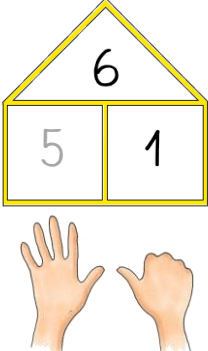
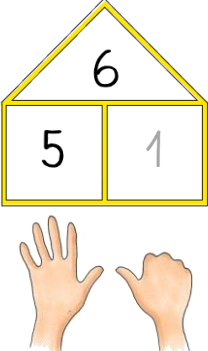
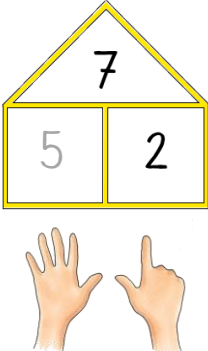
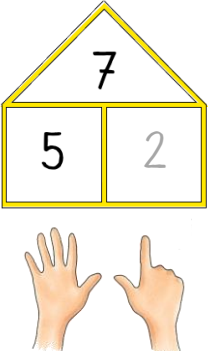
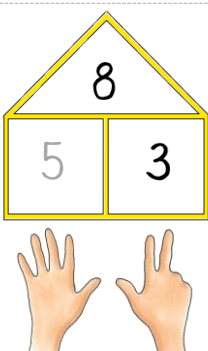
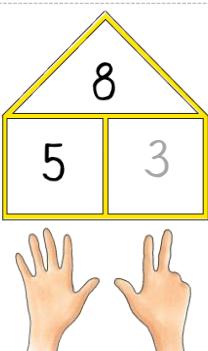
2 Zerlegungen von 5 (Zwanzigerfeld)

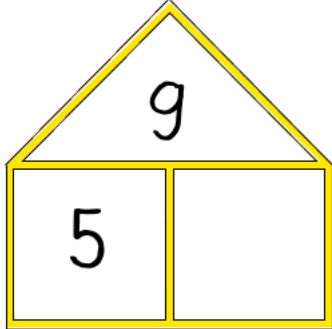
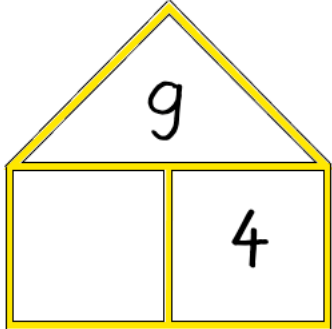
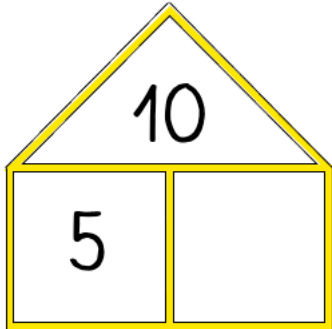
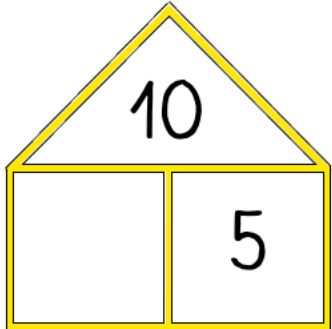
	
	
	

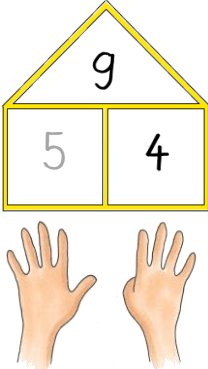
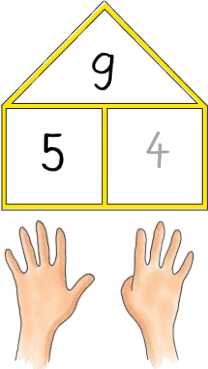
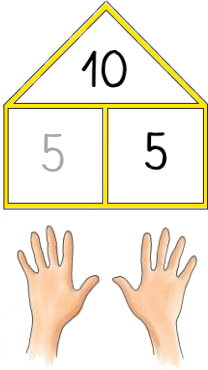
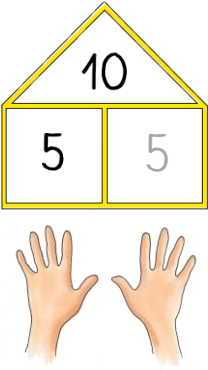
<p>5</p> <p>5 0</p> <p>● ● ● ● ●</p>	<p>5</p> <p>5 0</p> <p>● ● ● ● ●</p>
<p>5</p> <p>4 1</p> <p>● ● ● ● ●</p>	<p>5</p> <p>4 1</p> <p>● ● ● ● ●</p>
<p>5</p> <p>3 2</p> <p>● ● ● ● ●</p>	<p>5</p> <p>3 2</p> <p>● ● ● ● ●</p>

3 Zerlegungen mit 5 (Fingerbild)

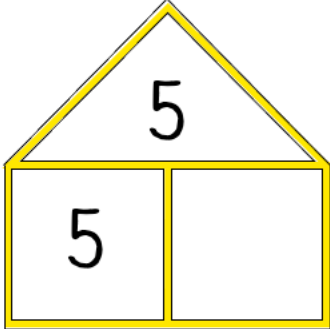
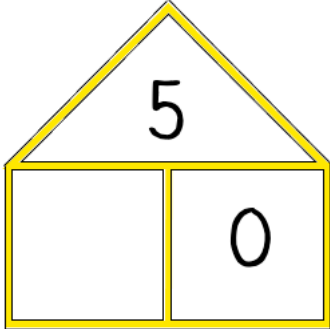
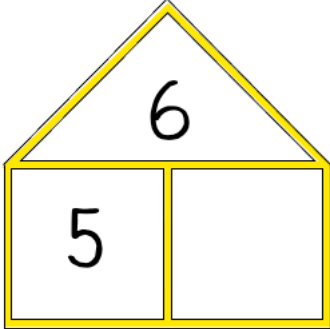
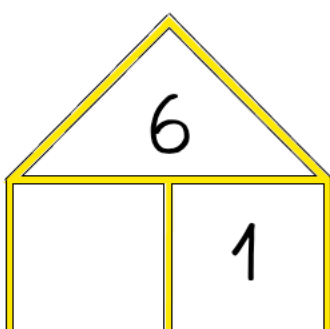
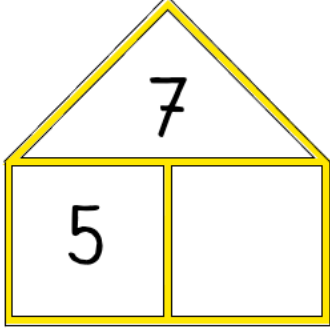
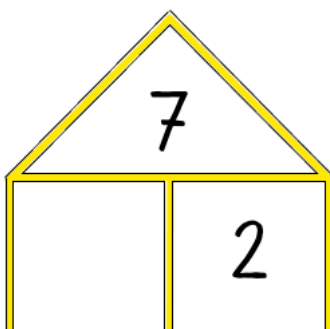
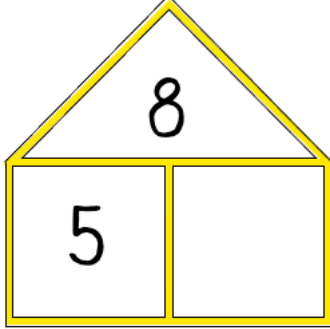
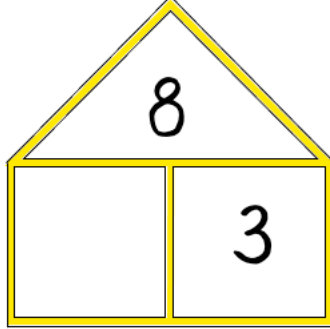
	
	
	
	

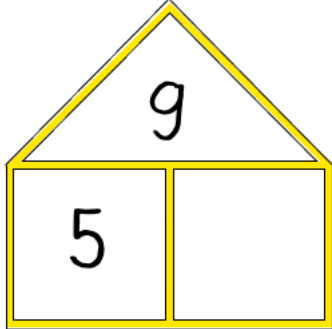
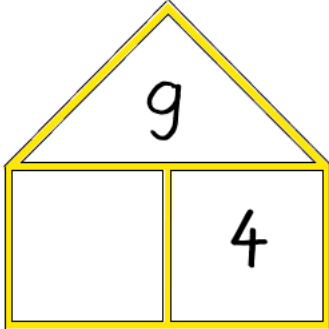
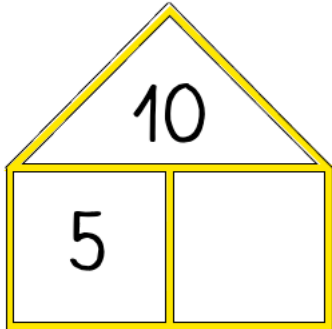
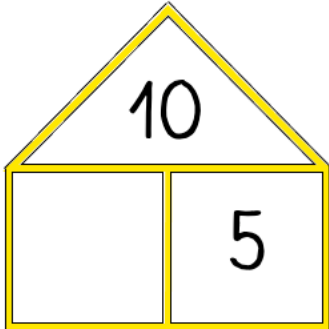
 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two rooms. The number 9 is in the roof, and the number 5 is in the left room. The right room is empty.</p>	 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two rooms. The number 9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

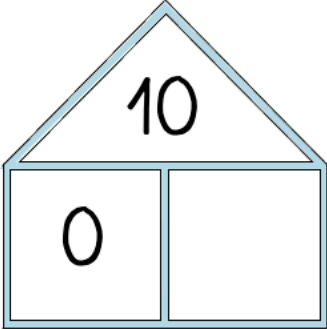
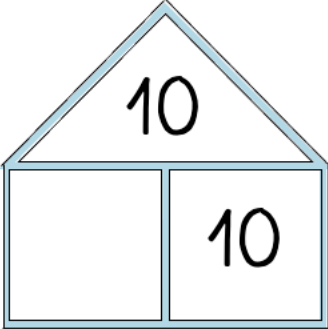
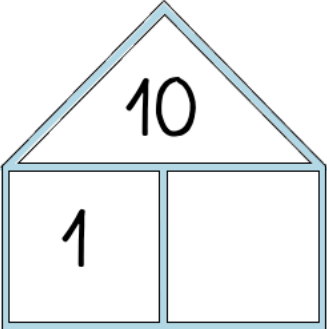
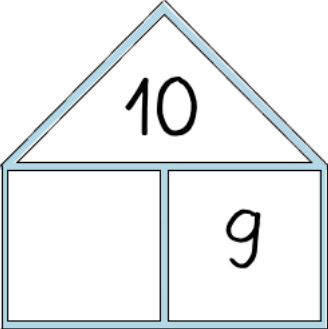
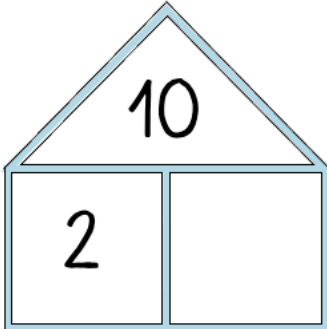
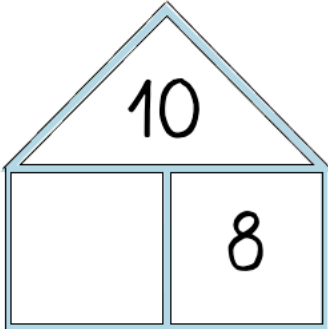
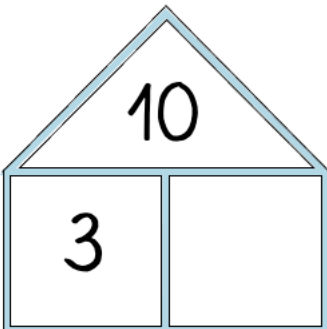
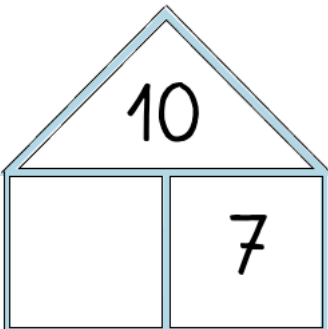
<p>House-shaped number 5 with tens digit 5 and ones digit 0. Below is a ten-frame with 5 red dots in the top row.</p>	<p>House-shaped number 5 with tens digit 5 and ones digit 0. Below is a ten-frame with 5 red dots in the top row.</p>
<p>House-shaped number 6 with tens digit 5 and ones digit 1. Below is a ten-frame with 6 red dots in the top row.</p>	<p>House-shaped number 6 with tens digit 5 and ones digit 1. Below is a ten-frame with 6 red dots in the top row.</p>
<p>House-shaped number 7 with tens digit 5 and ones digit 2. Below is a ten-frame with 7 red dots in the top row.</p>	<p>House-shaped number 7 with tens digit 5 and ones digit 2. Below is a ten-frame with 7 red dots in the top row.</p>
<p>House-shaped number 8 with tens digit 5 and ones digit 3. Below is a ten-frame with 8 red dots in the top row.</p>	<p>House-shaped number 8 with tens digit 5 and ones digit 3. Below is a ten-frame with 8 red dots in the top row.</p>

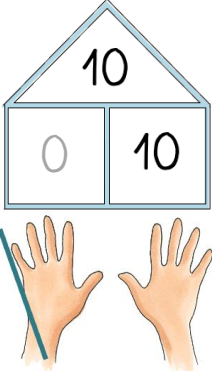
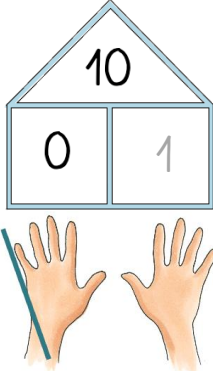
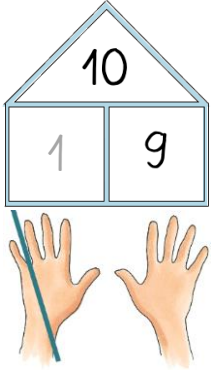
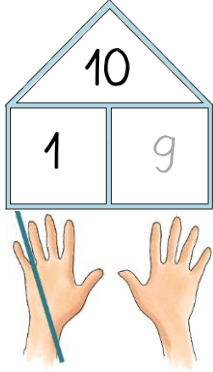
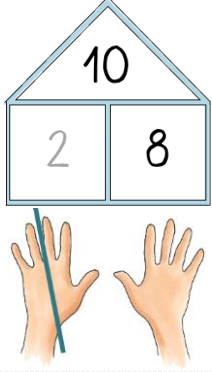
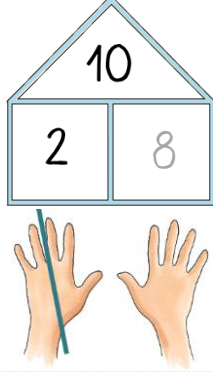
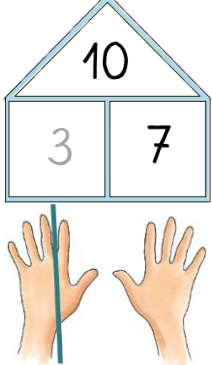
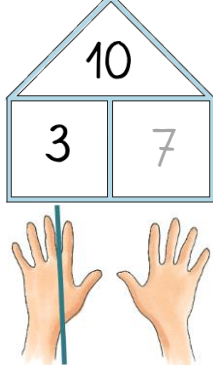
	
	

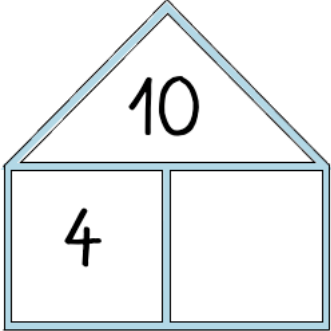
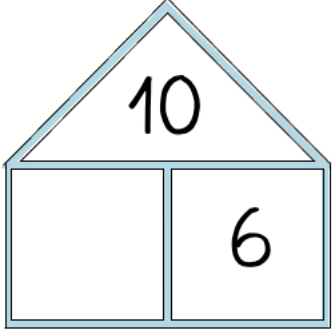
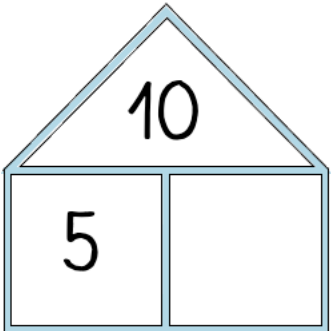
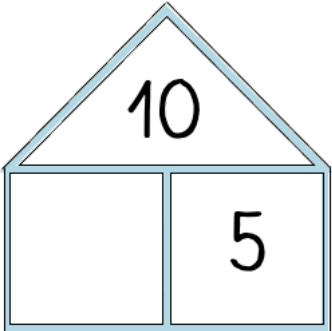
The image displays four place value charts arranged in a 2x2 grid. Each chart consists of a house-shaped diagram above a ten-frame. The house diagram has a triangular roof and a rectangular body divided into two columns. A vertical blue line extends from the center of the house down to the center of the ten-frame.

- Top-left chart:** The roof contains the number 9. The left column of the house contains the number 5, and the right column contains the number 4. The ten-frame below has 9 red dots in the top row, with 5 dots in the left half and 4 dots in the right half.
- Top-right chart:** The roof contains the number 9. The left column of the house contains the number 5, and the right column contains the number 4. The ten-frame below has 9 red dots in the top row, with 5 dots in the left half and 4 dots in the right half.
- Bottom-left chart:** The roof contains the number 10. The left column of the house contains the number 5, and the right column contains the number 5. The ten-frame below has 10 red dots in the top row, with 5 dots in the left half and 5 dots in the right half.
- Bottom-right chart:** The roof contains the number 10. The left column of the house contains the number 5, and the right column contains the number 5. The ten-frame below has 10 red dots in the top row, with 5 dots in the left half and 5 dots in the right half.

5 Zerlegungen von 10 (Fingerbild)

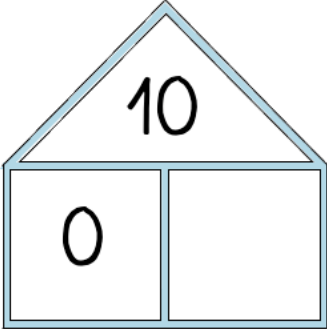
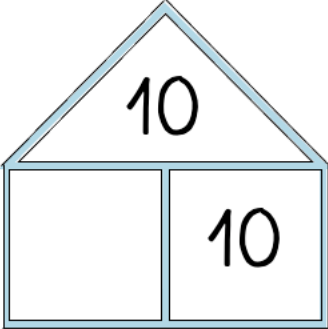
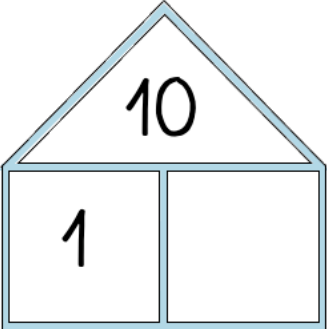
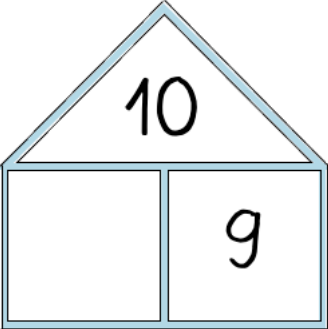
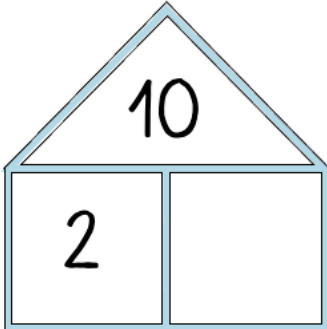
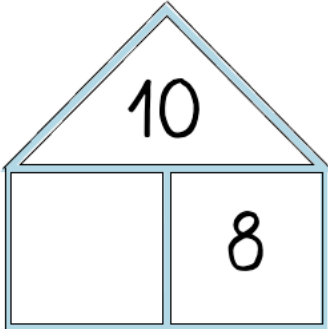
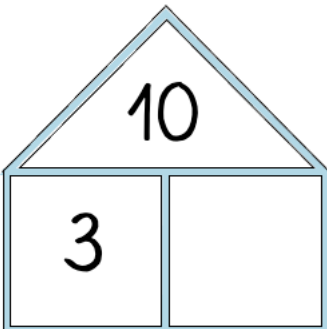
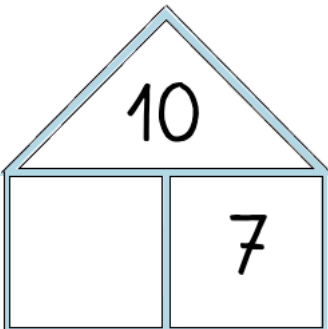
	
	
	
	

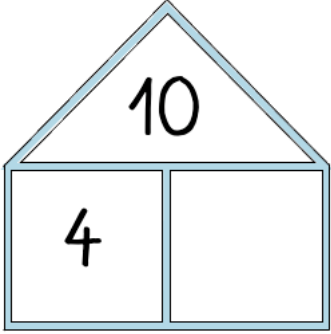
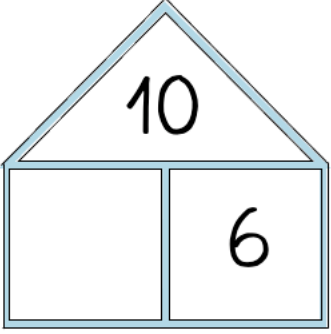
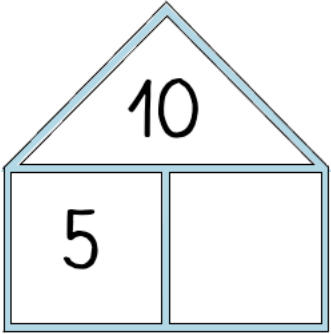
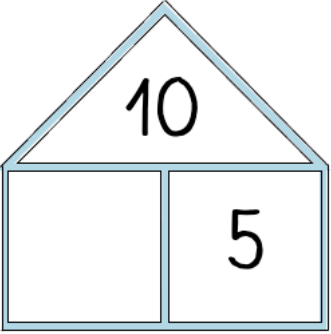
 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room contains the number 4, and the right room is empty.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided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

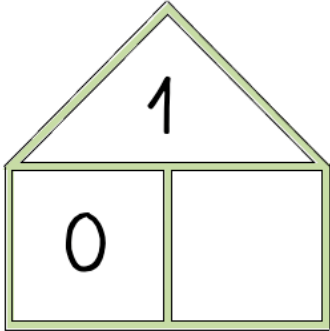
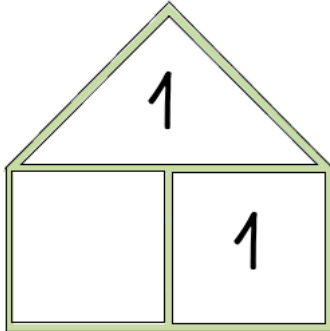
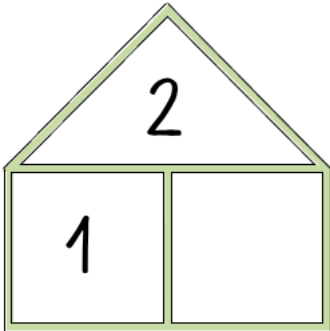
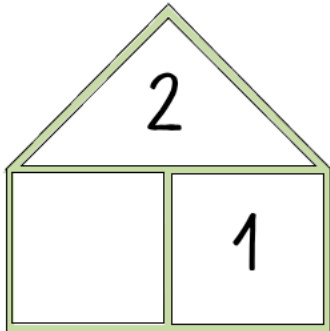
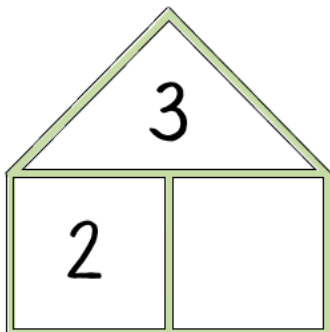
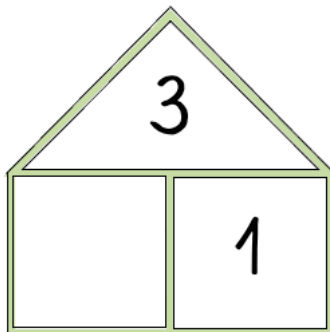
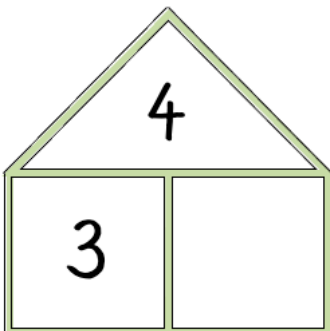
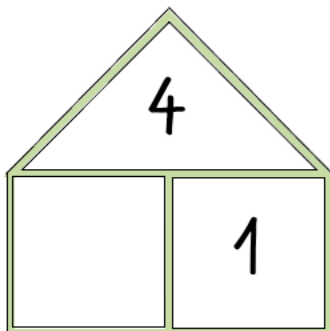
	
	
	
	

<p>House diagram: Tens place: 0, Ones place: 10. Ten-frame: 10 red dots.</p>	<p>House diagram: Tens place: 0, Ones place: 10. Ten-frame: 10 red dots.</p>
<p>House diagram: Tens place: 1, Ones place: 9. Ten-frame: 10 red dots, vertical line after 1st dot.</p>	<p>House diagram: Tens place: 1, Ones place: 9. Ten-frame: 10 red dots, vertical line after 1st dot.</p>
<p>House diagram: Tens place: 2, Ones place: 8. Ten-frame: 10 red dots, vertical line after 2nd dot.</p>	<p>House diagram: Tens place: 2, Ones place: 8. Ten-frame: 10 red dots, vertical line after 2nd dot.</p>
<p>House diagram: Tens place: 3, Ones place: 7. Ten-frame: 10 red dots, vertical line after 3rd dot.</p>	<p>House diagram: Tens place: 3, Ones place: 7. Ten-frame: 10 red dots, vertical line after 3rd dot.</p>

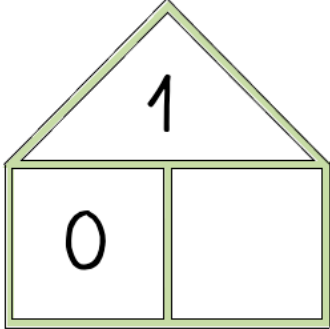
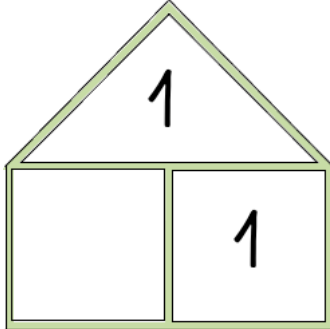
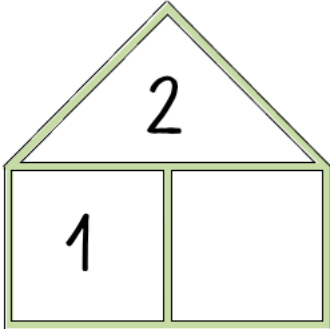
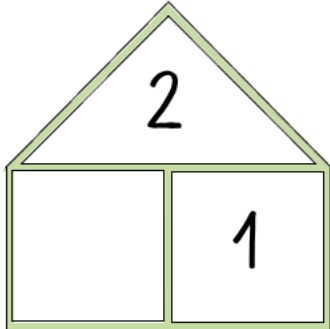
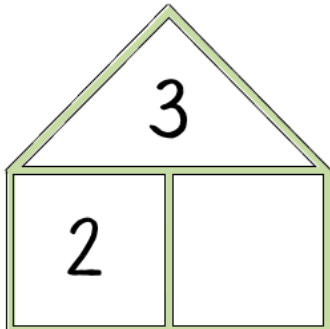
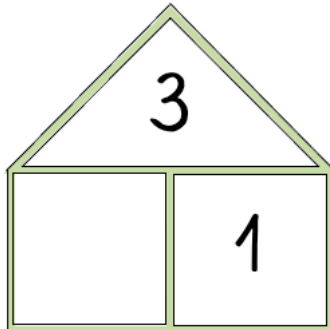
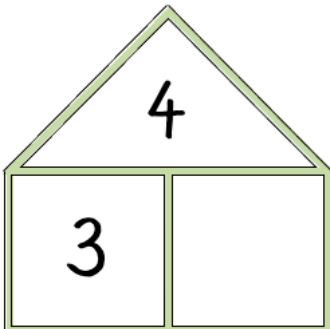
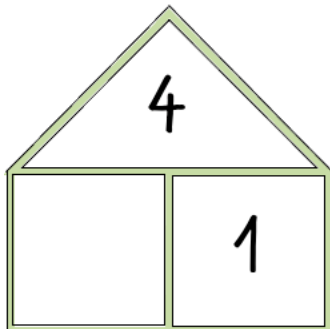
 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided into two rooms. The left room contains the number 4, and the right room is empty.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 10. The rectangular base is divided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

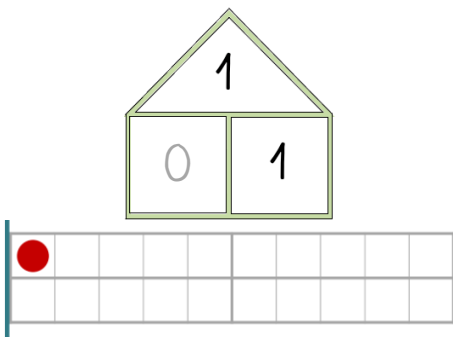
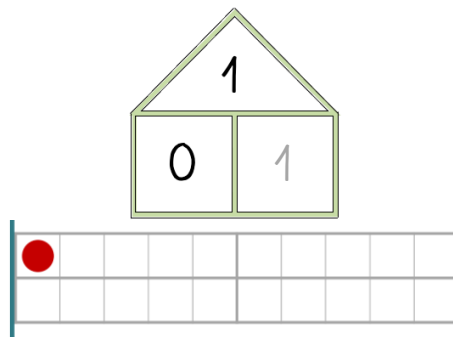
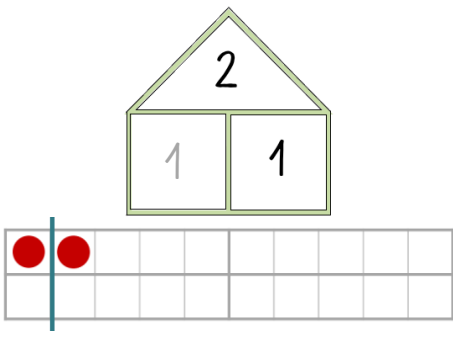
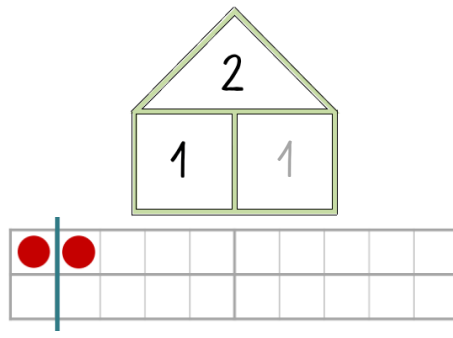
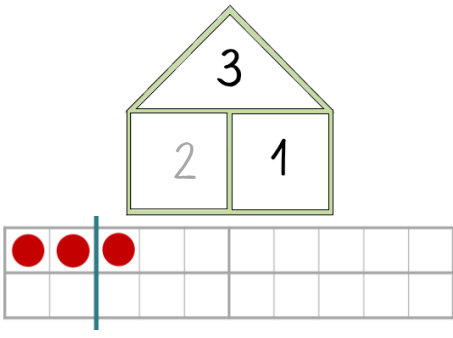
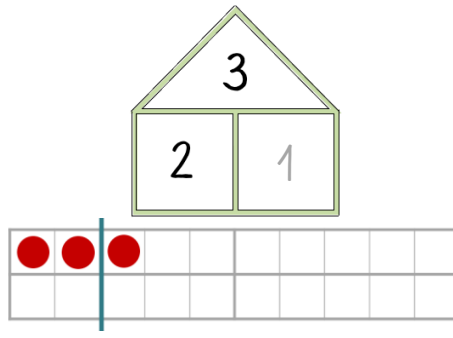
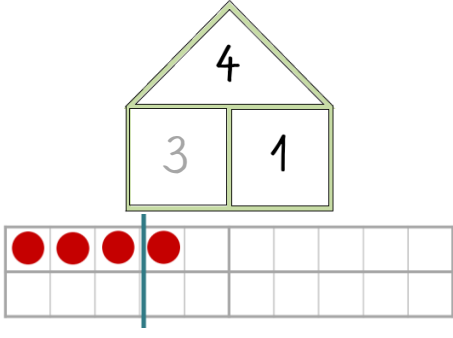
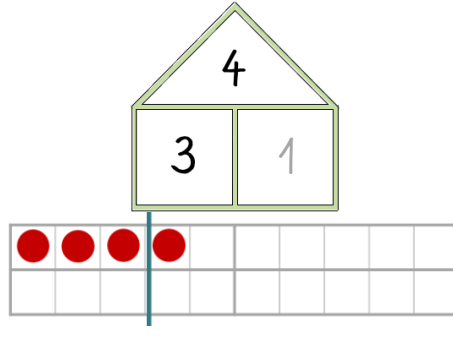
The image displays four ten-frame diagrams arranged in a 2x2 grid, each illustrating the decomposition of the number 10 into tens and ones. Each diagram consists of a ten-frame with a vertical line separating the tens and ones columns. Above the ten-frame is a house-shaped structure with the number '10' in the roof and two boxes for the digits. The first two diagrams show 4 in the tens place and 6 in the ones place, with 4 red dots in the tens column and 6 red dots in the ones column. The last two diagrams show 5 in the tens place and 5 in the ones place, with 5 red dots in each column.

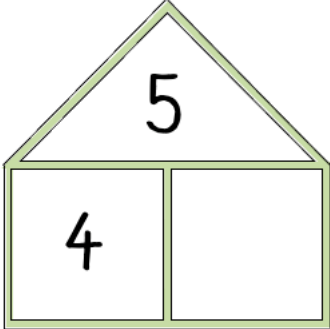
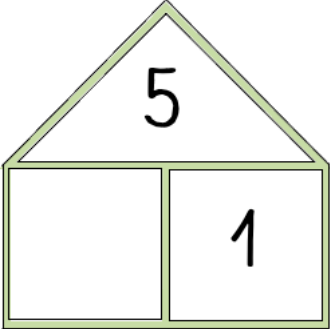
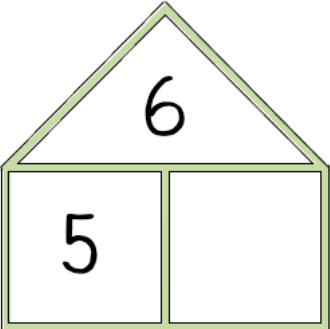
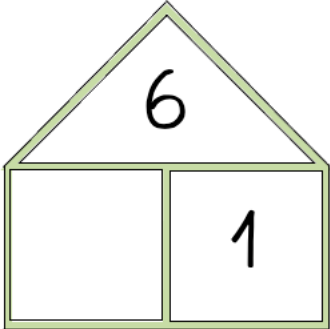
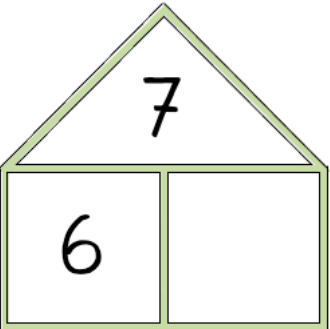
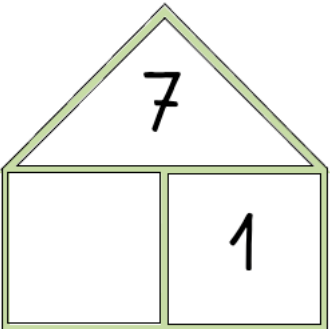
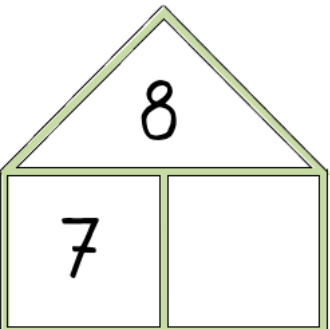
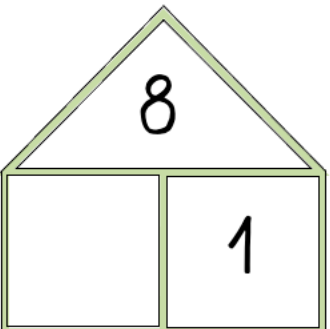
7 Zerlegungen mit 1

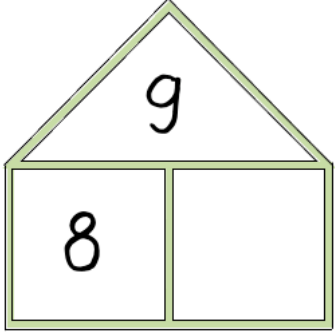
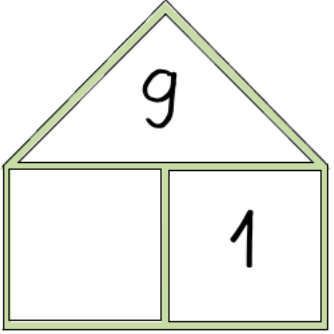
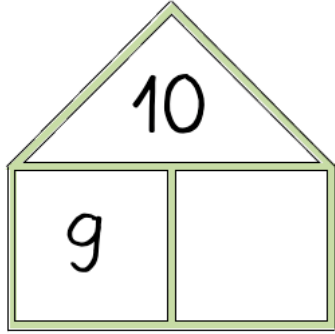
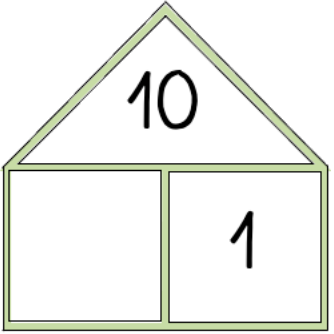
 <p>1 0</p>	 <p>1 1</p>
 <p>2 1</p>	 <p>2 1</p>
 <p>3 2</p>	 <p>3 1</p>
 <p>4 3</p>	 <p>4 1</p>

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>House-shaped number 1 with 0 and 1 in the base. Below it is a ten-frame with 1 red dot in the first position.</p>	 <p>House-shaped number 1 with 0 and 1 in the base. Below it is a ten-frame with 1 red dot in the first position.</p>
 <p>House-shaped number 2 with 1 and 1 in the base. Below it is a ten-frame with 2 red dots in the first two positions.</p>	 <p>House-shaped number 2 with 1 and 1 in the base. Below it is a ten-frame with 2 red dots in the first two positions.</p>
 <p>House-shaped number 3 with 2 and 1 in the base. Below it is a ten-frame with 3 red dots in the first three positions.</p>	 <p>House-shaped number 3 with 2 and 1 in the base. Below it is a ten-frame with 3 red dots in the first three positions.</p>
 <p>House-shaped number 4 with 3 and 1 in the base. Below it is a ten-frame with 4 red dots in the first four positions.</p>	 <p>House-shaped number 4 with 3 and 1 in the base. Below it is a ten-frame with 4 red dots in the first four positions.</p>

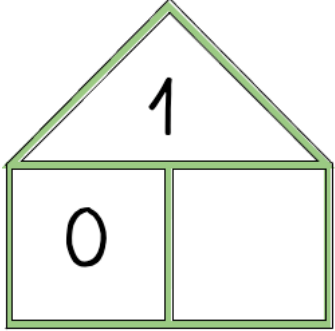
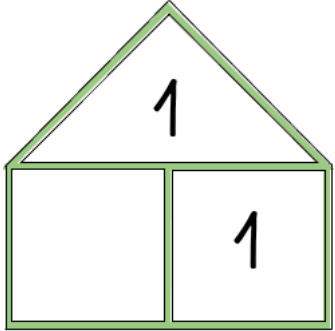
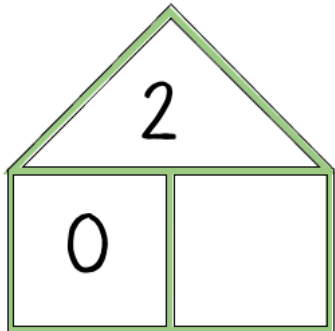
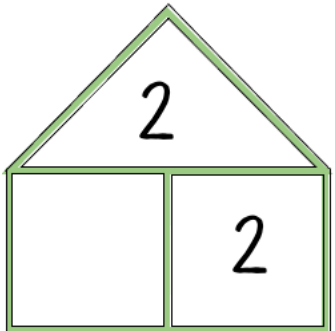
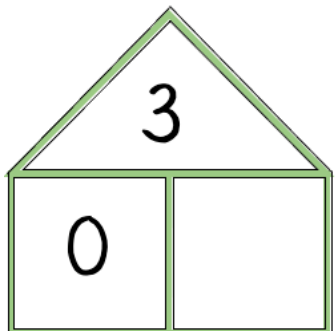
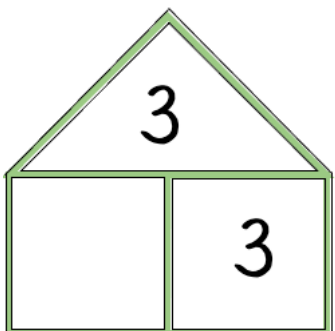
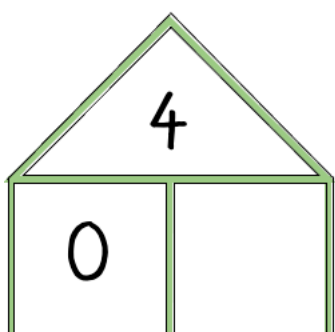
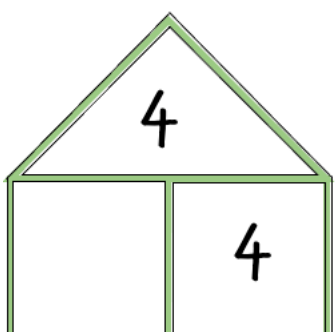
	
	
	
	

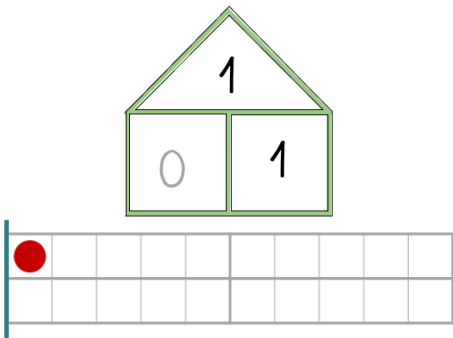
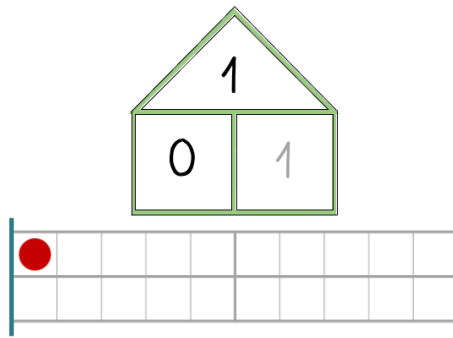
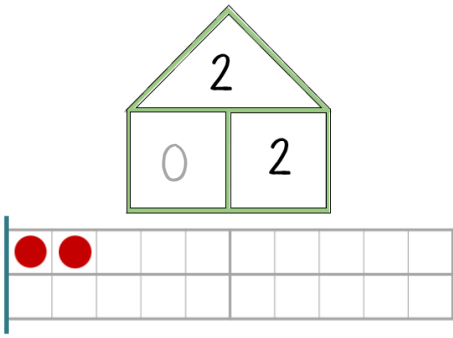
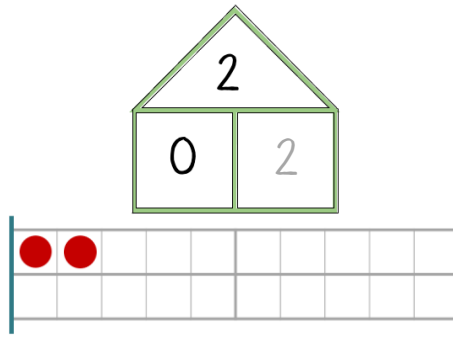
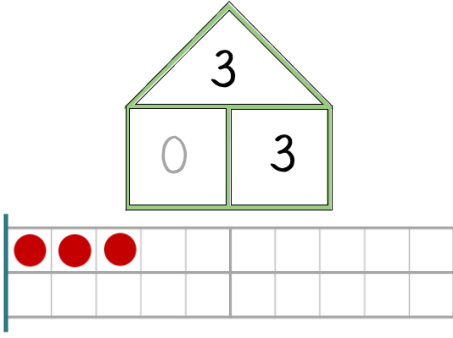
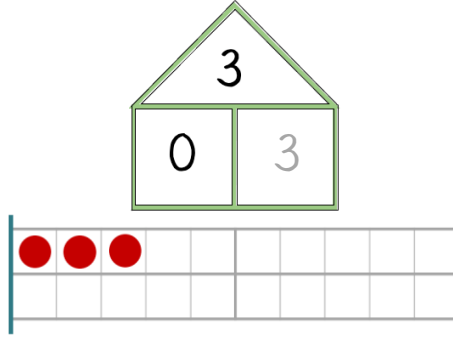
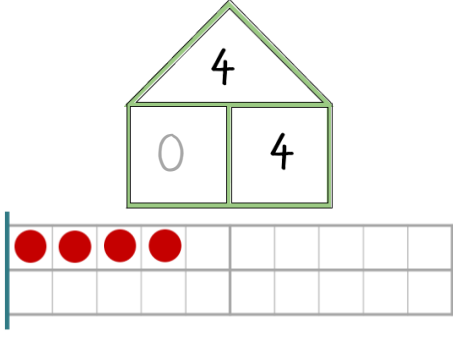
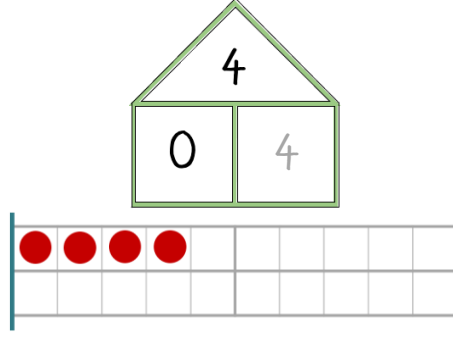
 <p>A house-shaped diagram with a triangular roof containing the number 9. Below the roof is a rectangular base divided into two equal boxes. The left box contains the number 8, and the right box is empty.</p>	 <p>A house-shaped diagram with a triangular roof containing the number 9. Below the roof is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

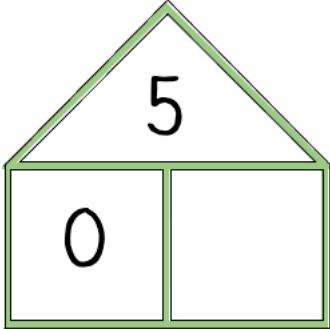
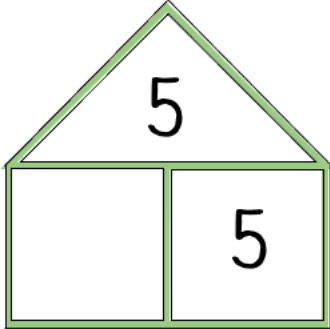
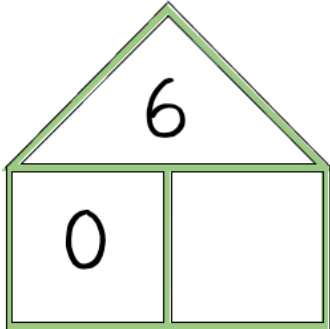
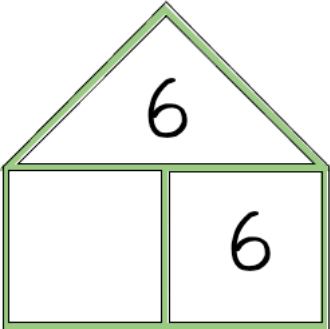
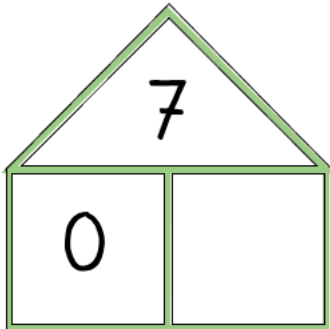
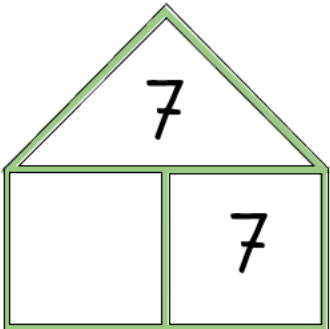
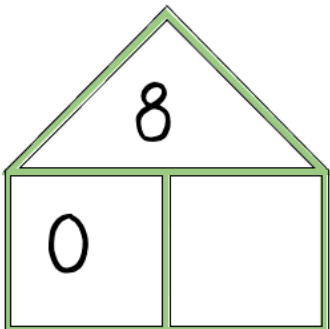
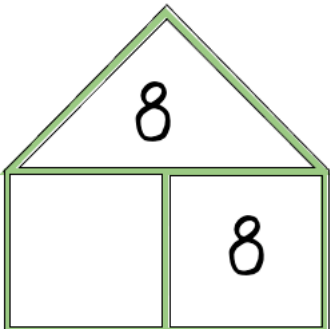
The image displays four place value charts arranged in a 2x2 grid. Each chart consists of a house-shaped diagram above a ten-frame. The top triangle of the house contains a number, and the two rectangular rooms below it contain the tens and ones digits respectively. The ten-frame below has a vertical blue line separating the tens column (left) from the ones column (right). Red dots are placed in the top row of the ten-frame to represent the value.

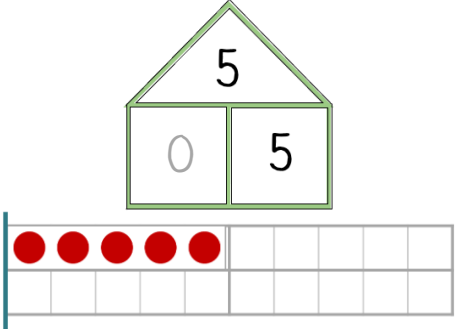
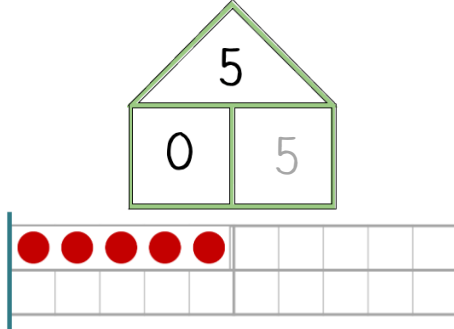
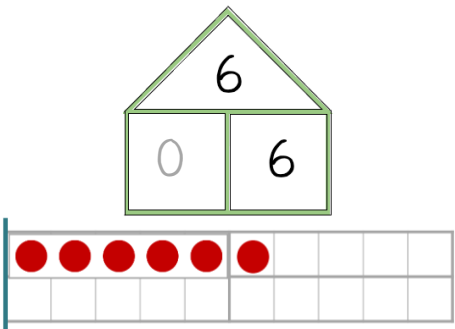
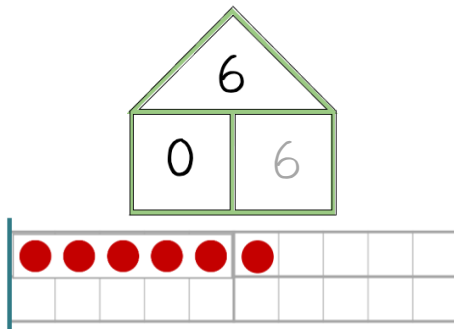
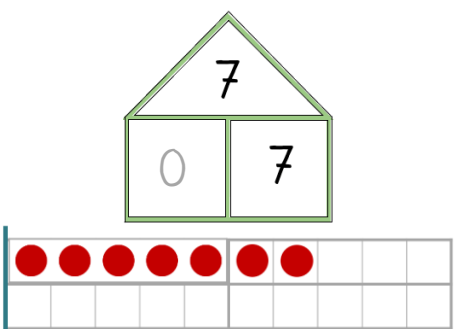
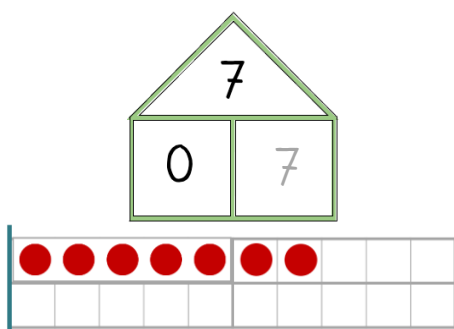
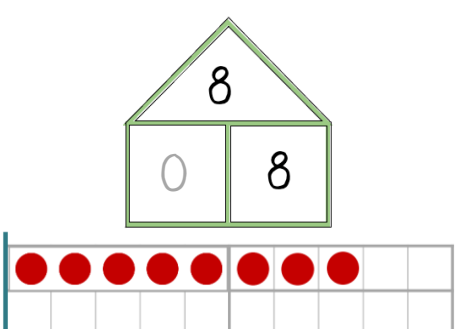
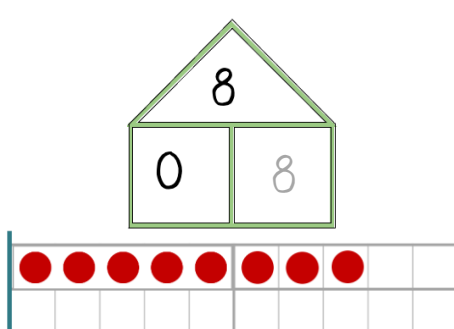
- Top-left chart:** The house contains the number 9. The tens room contains the digit 8 and the ones room contains the digit 1. The ten-frame has 8 red dots in the tens column and 1 red dot in the ones column.
- Top-right chart:** The house contains the number 9. The tens room contains the digit 8 and the ones room contains the digit 1. The ten-frame has 8 red dots in the tens column and 1 red dot in the ones column.
- Bottom-left chart:** The house contains the number 10. The tens room contains the digit 9 and the ones room contains the digit 1. The ten-frame has 9 red dots in the tens column and 1 red dot in the ones column.
- Bottom-right chart:** The house contains the number 10. The tens room contains the digit 9 and the ones room contains the digit 1. The ten-frame has 9 red dots in the tens column and 1 red dot in the ones column.

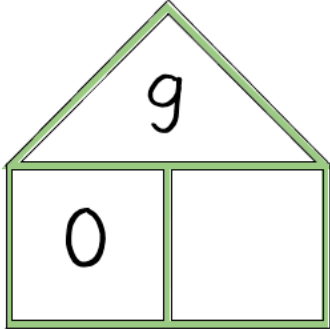
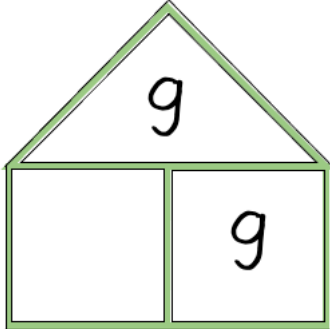
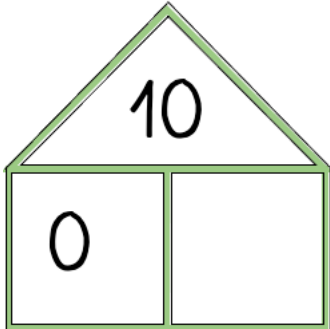
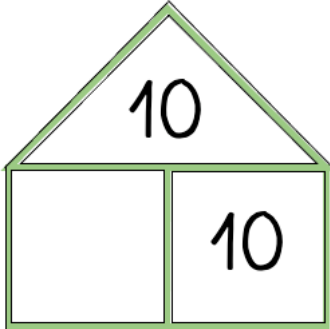
8 Zerlegungen mit 0

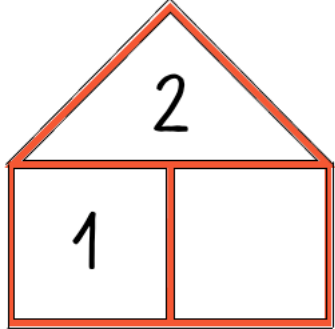
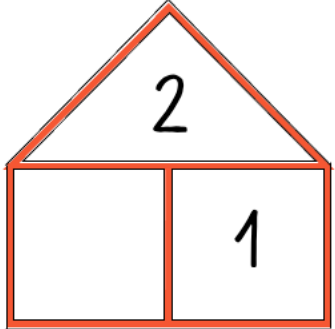
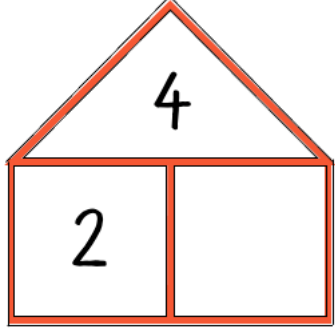
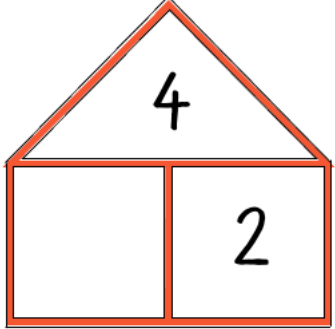
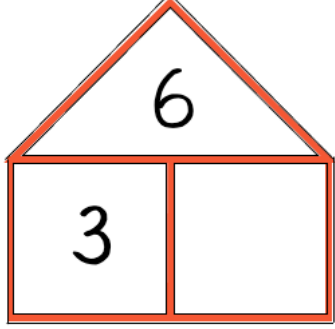
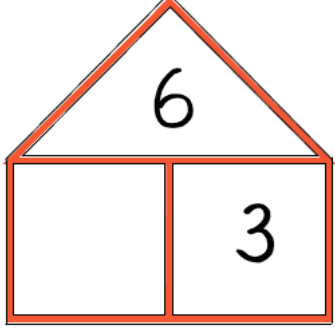
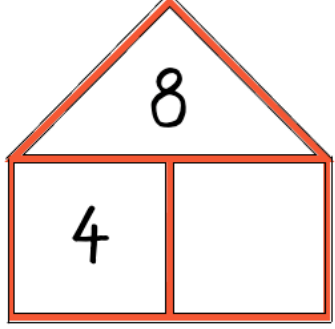
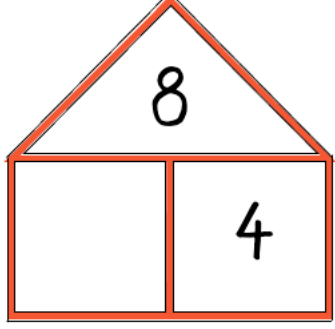
	
	
	
	

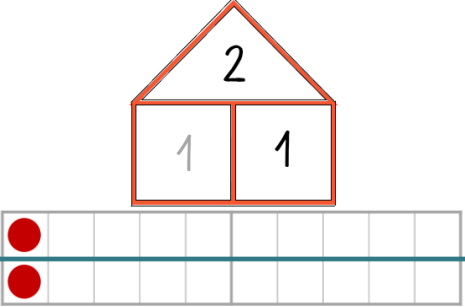
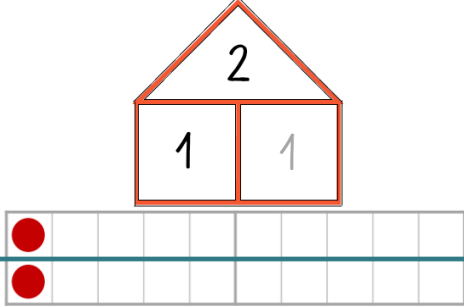
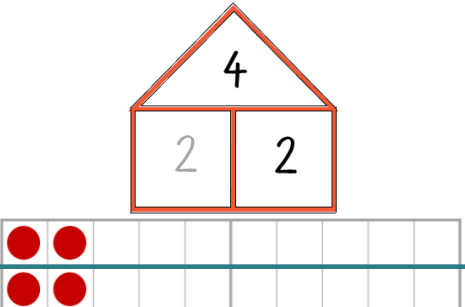
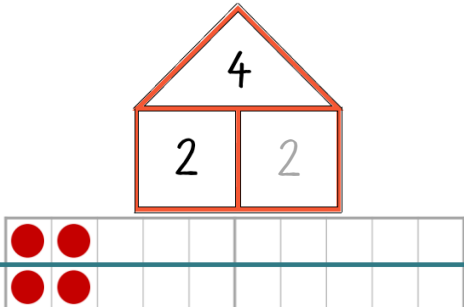
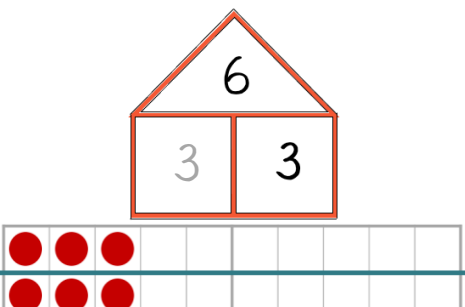
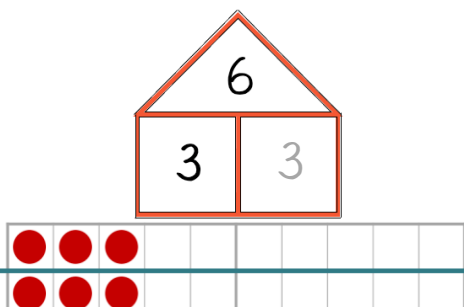
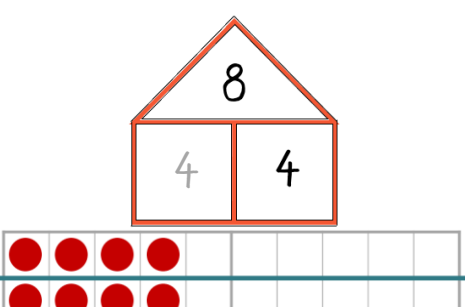
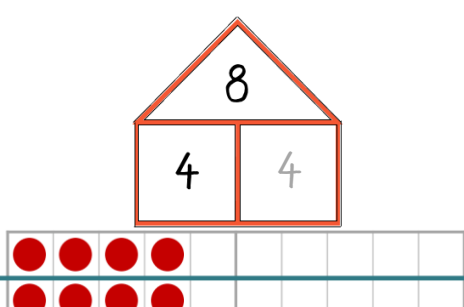
	
	
	
	

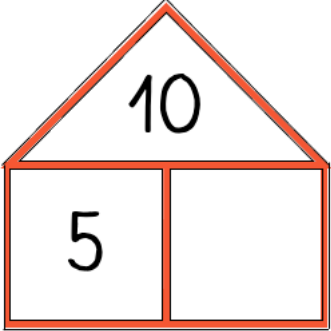
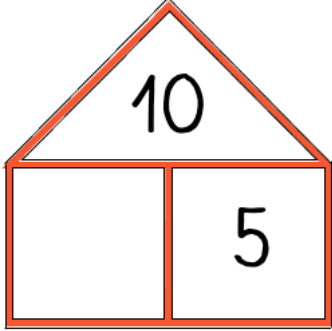
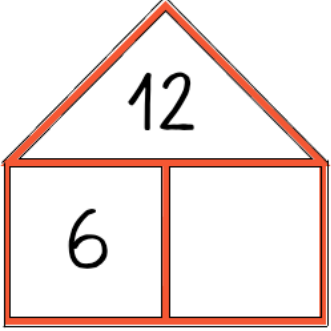
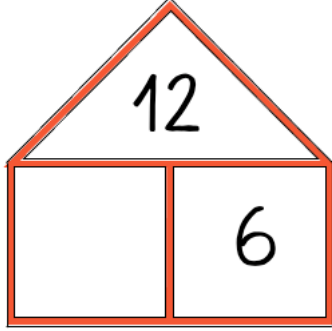
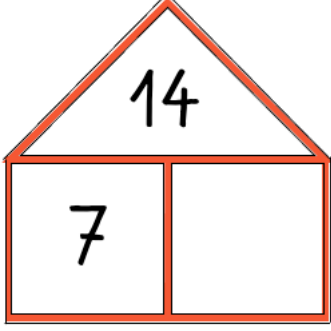
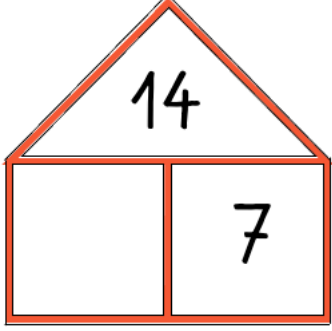
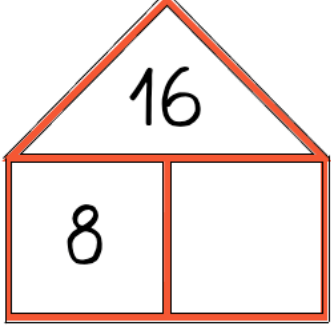
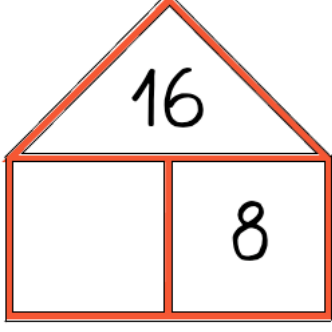
	
	
	
	

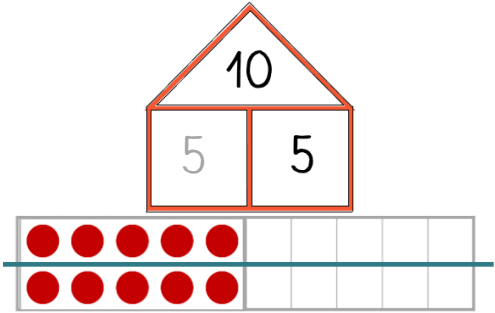
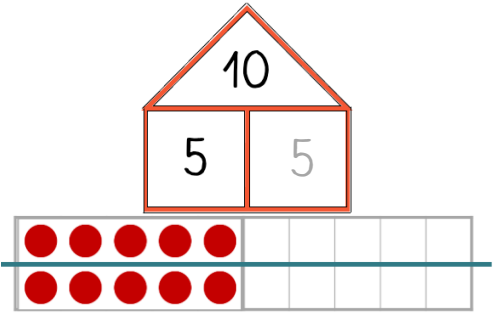
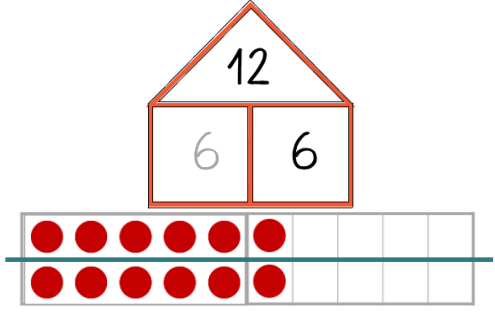
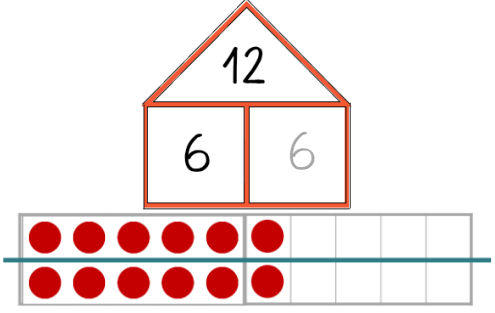
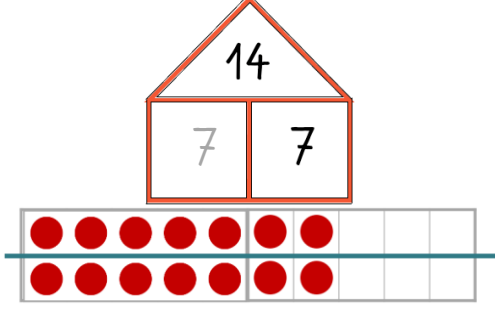
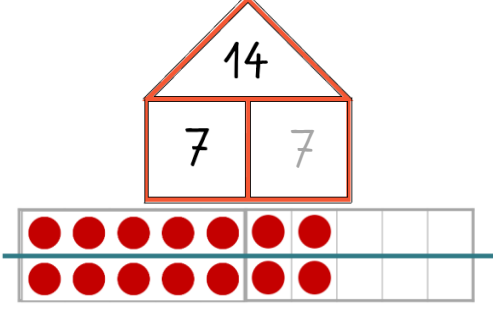
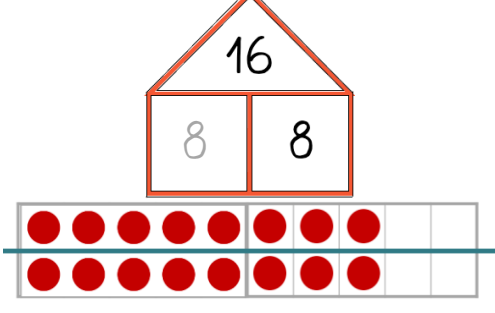
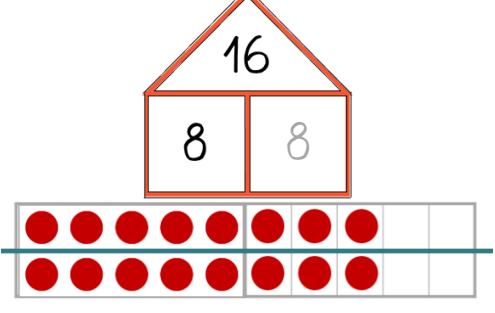
	
	

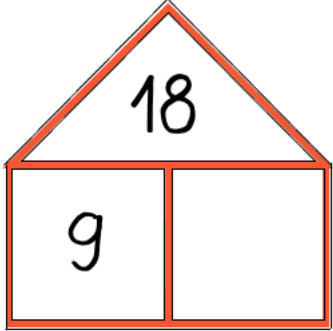
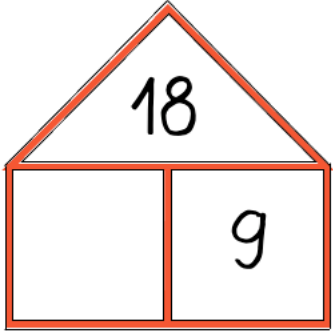
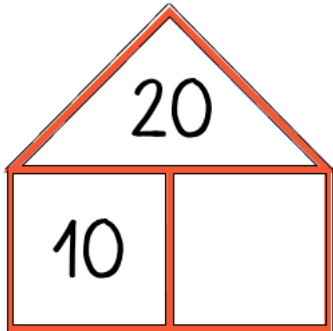
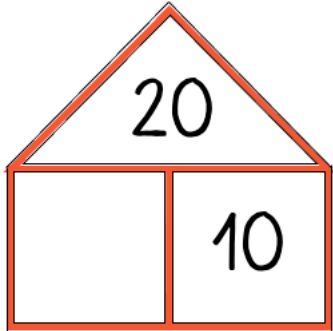
9 Zerlegungen in zwei gleiche Hälften

 <p>2</p> <p>1</p>	 <p>2</p> <p>1</p>
 <p>4</p> <p>2</p>	 <p>4</p> <p>2</p>
 <p>6</p> <p>3</p>	 <p>6</p> <p>3</p>
 <p>8</p> <p>4</p>	 <p>8</p> <p>4</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 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>House-shaped number 10 with two 5s. Below is a ten-frame with 10 red dots.</p>	 <p>House-shaped number 10 with two 5s. Below is a ten-frame with 10 red dots.</p>
 <p>House-shaped number 12 with two 6s. Below is a ten-frame with 12 red dots.</p>	 <p>House-shaped number 12 with two 6s. Below is a ten-frame with 12 red dots.</p>
 <p>House-shaped number 14 with two 7s. Below is a ten-frame with 14 red dots.</p>	 <p>House-shaped number 14 with two 7s. Below is a ten-frame with 14 red dots.</p>
 <p>House-shaped number 16 with two 8s. Below is a ten-frame with 16 red dots.</p>	 <p>House-shaped number 16 with two 8s. Below is a ten-frame with 16 red dots.</p>

The image displays four place value charts arranged in a 2x2 grid. Each chart consists of a house-shaped structure above a ten-frame. The top row shows the number 18, and the bottom row shows the number 20. Each house has a triangle on top containing the number and a rectangle below divided into two columns, each containing a digit. The ten-frame below has two rows of five cells, with red dots representing the value of the number.

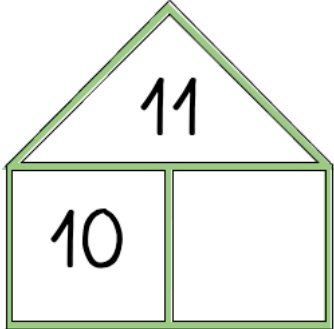
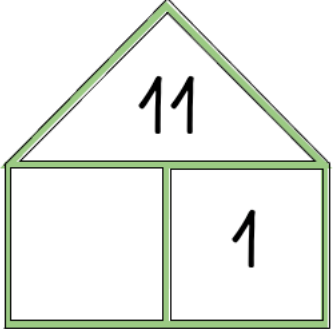
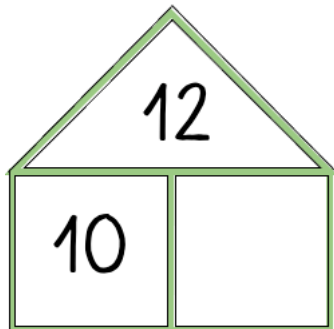
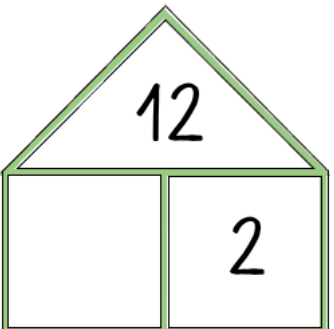
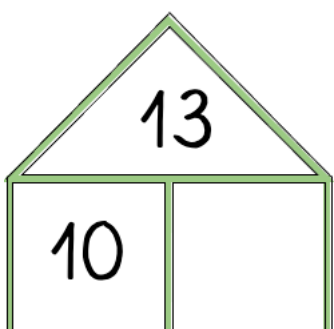
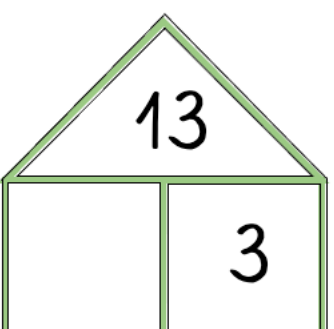
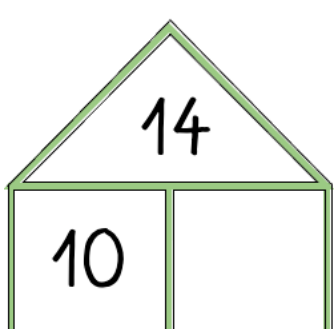
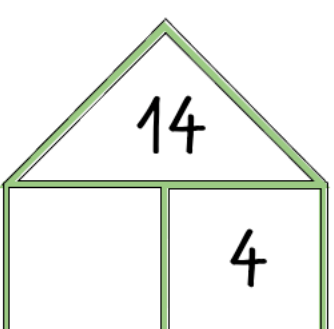
18	
9	9
●●●●●	●●●●●
●●●●●	●●●●●

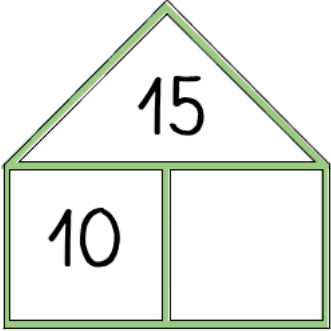
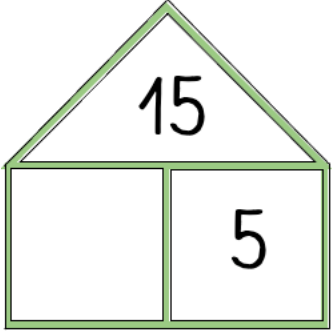
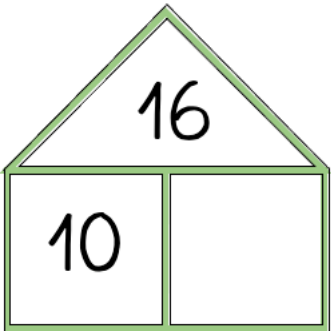
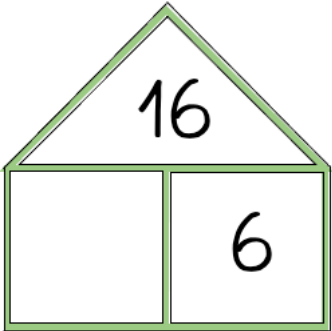
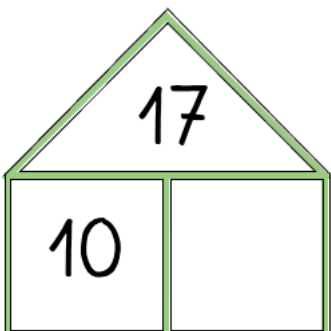
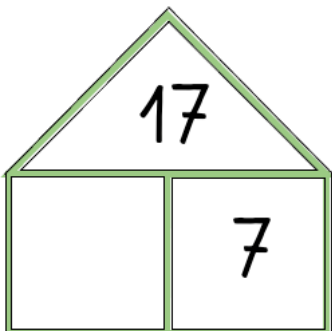
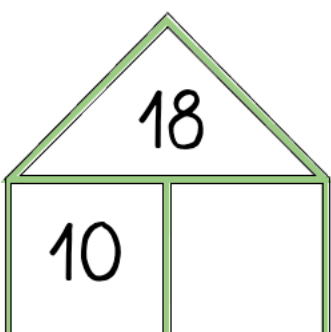
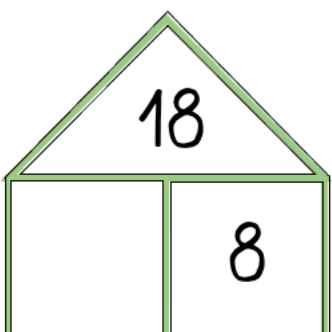
18	
9	9
●●●●●	●●●●●
●●●●●	●●●●●

20	
10	10
●●●●●	●●●●●
●●●●●	●●●●●

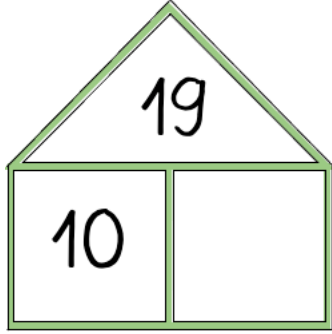
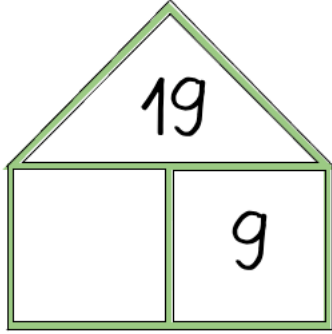
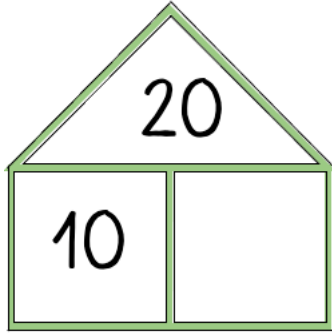
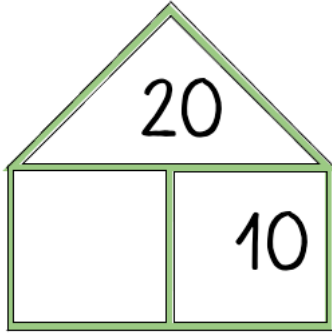
20	
10	10
●●●●●	●●●●●
●●●●●	●●●●●

10 Zerlegungen mit 10

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

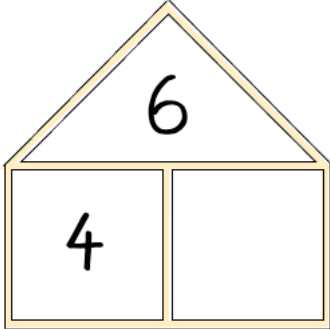
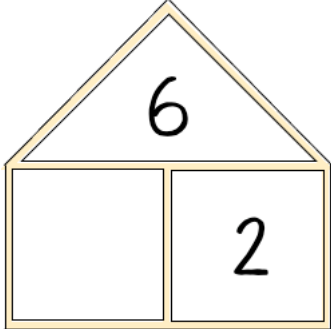
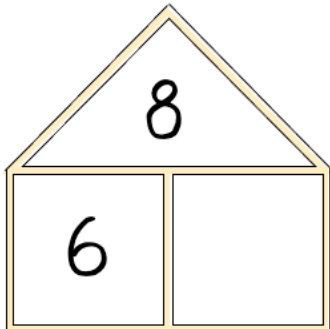
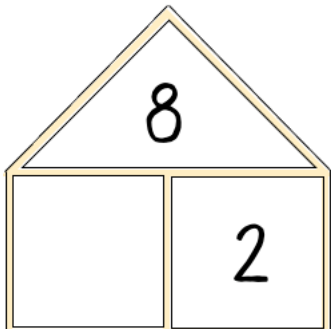
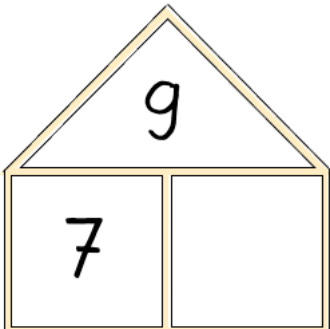
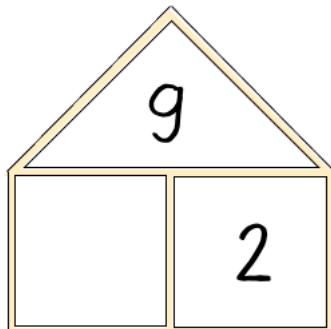
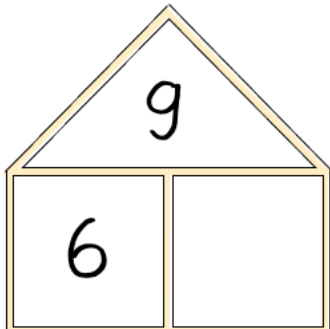
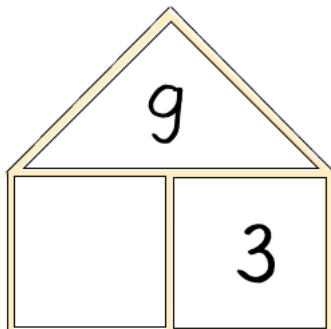
<p>House-shaped number 15. The roof contains the number 15. The main body is divided into two boxes: the left box contains the digit 1 and the right box contains the digit 5. Below the house is a ten-frame with two rows of five boxes. The top row is filled with 10 red dots, and the bottom row has 5 red dots in the first five boxes, representing the number 15.</p>	<p>House-shaped number 15. The roof contains the number 15. The main body is divided into two boxes: the left box contains the digits 10 and the right box contains the digit 5. Below the house is a ten-frame with two rows of five boxes. The top row is filled with 10 red dots, and the bottom row has 5 red dots in the first five boxes, representing the number 15.</p>
<p>House-shaped number 16. The roof contains the number 16. The main body is divided into two boxes: the left box contains the digit 1 and the right box contains the digit 6. Below the house is a ten-frame with two rows of five boxes. The top row is filled with 10 red dots, and the bottom row has 6 red dots in the first six boxes, representing the number 16.</p>	<p>House-shaped number 16. The roof contains the number 16. The main body is divided into two boxes: the left box contains the digits 10 and the right box contains the digit 6. Below the house is a ten-frame with two rows of five boxes. The top row is filled with 10 red dots, and the bottom row has 6 red dots in the first six boxes, representing the number 16.</p>
<p>House-shaped number 17. The roof contains the number 17. The main body is divided into two boxes: the left box contains the digit 1 and the right box contains the digit 7. Below the house is a ten-frame with two rows of five boxes. The top row is filled with 10 red dots, and the bottom row has 7 red dots in the first seven boxes, representing the number 17.</p>	<p>House-shaped number 17. The roof contains the number 17. The main body is divided into two boxes: the left box contains the digits 10 and the right box contains the digit 7. Below the house is a ten-frame with two rows of five boxes. The top row is filled with 10 red dots, and the bottom row has 7 red dots in the first seven boxes, representing the number 17.</p>
<p>House-shaped number 18. The roof contains the number 18. The main body is divided into two boxes: the left box contains the digit 1 and the right box contains the digit 8. Below the house is a ten-frame with two rows of five boxes. The top row is filled with 10 red dots, and the bottom row has 8 red dots in the first eight boxes, representing the number 18.</p>	<p>House-shaped number 18. The roof contains the number 18. The main body is divided into two boxes: the left box contains the digits 10 and the right box contains the digit 8. Below the house is a ten-frame with two rows of five boxes. The top row is filled with 10 red dots, and the bottom row has 8 red dots in the first eight boxes, representing the number 18.</p>

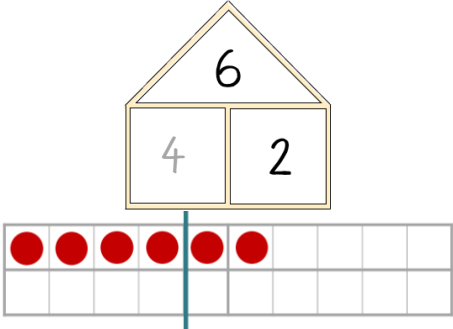
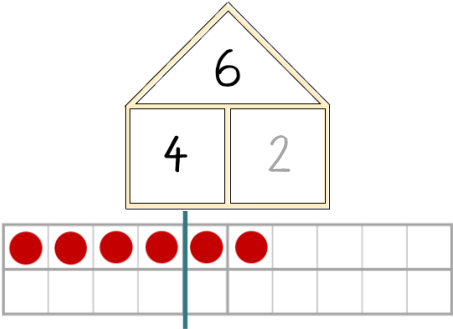
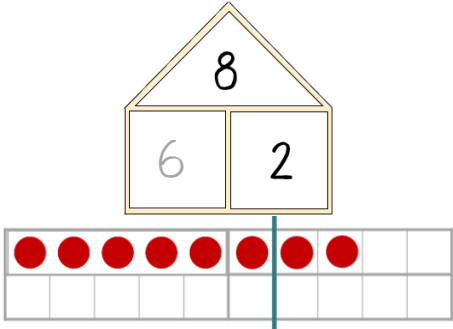
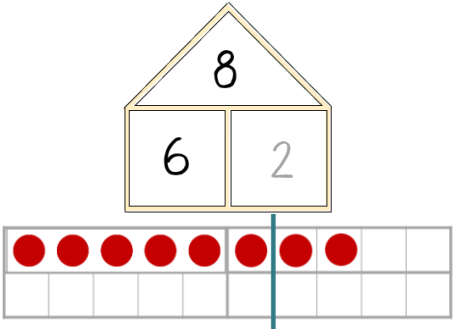
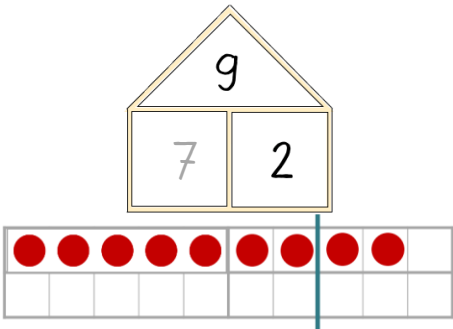
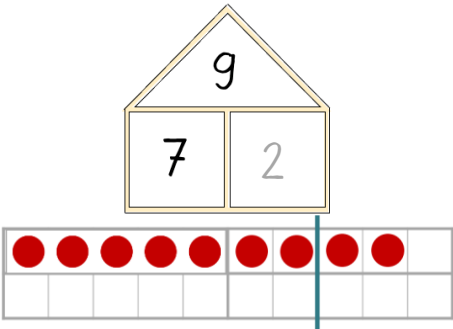
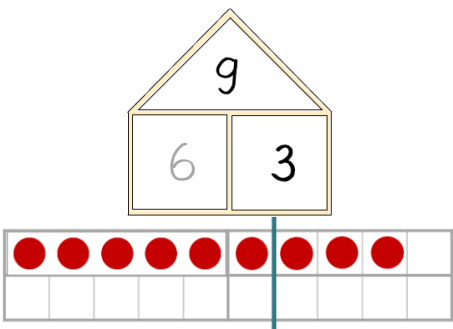
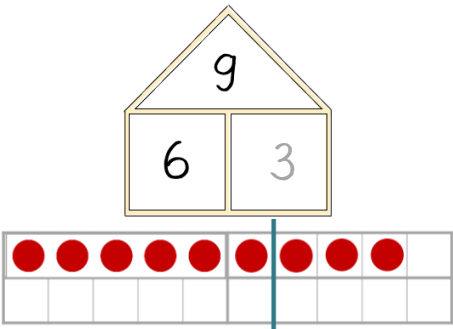
 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two boxes. The number 19 is written in the roof. The left box contains the number 10, and the right box is empty.</p>	 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two boxes. The number 19 is written in the roof. The left box is empty, and the right box contains the number 9.</p>
 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two boxes. The number 20 is written in the roof. The left box contains the number 10, and the right box is empty.</p>	 <p>A house-shaped diagram with a triangular roof and a rectangular base divided into two boxes. The number 20 is written in the roof. The left box is empty, and the right box contains the number 10.</p>

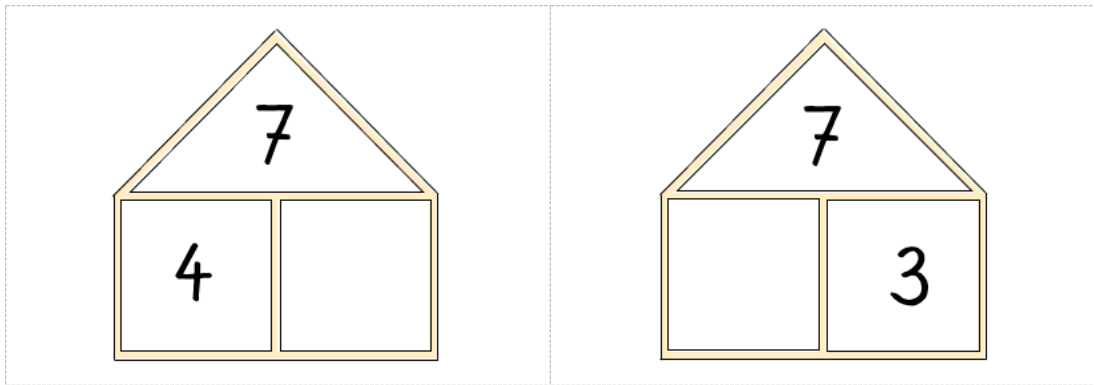
The image displays four place value charts arranged in a 2x2 grid. Each chart consists of a ten-frame (a rectangle divided into two columns of five) and a ten-rod (a horizontal bar divided into ten equal segments) positioned below it. A horizontal blue line is drawn across the middle of each ten-rod. 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 house-shaped structure contains the number 19. The left box contains '10' and the right box contains '9'. The ten-frame has 10 red dots in the left column and 9 red dots in the right column. The ten-rod has 10 red dots in the first 9 segments.
- Top-right chart:** The house-shaped structure contains the number 19. The left box contains '10' and the right box contains '9'. The ten-frame has 10 red dots in the left column and 9 red dots in the right column. The ten-rod has 10 red dots in the first 9 segments.
- Bottom-left chart:** The house-shaped structure contains the number 20. The left box contains '10' and the right box contains '10'. The ten-frame has 10 red dots in the left column and 10 red dots in the right column. The ten-rod has 10 red dots in all 10 segments.
- Bottom-right chart:** The house-shaped structure contains the number 20. The left box contains '10' and the right box contains '10'. The ten-frame has 10 red dots in the left column and 10 red dots in the right column. The ten-rod has 10 red dots in all 10 segments.

11 Schwierige Zerlegungen

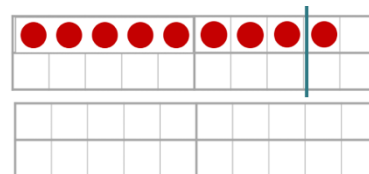
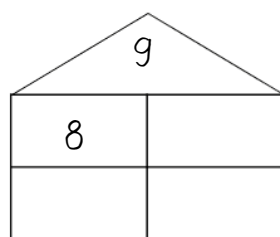
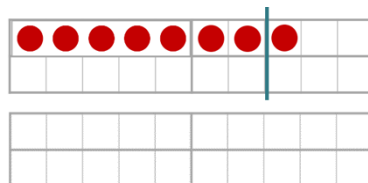
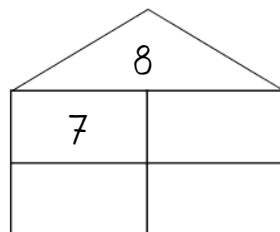
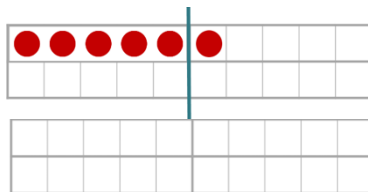
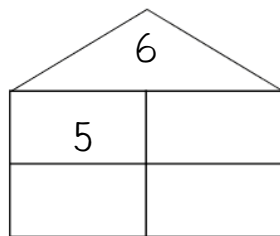
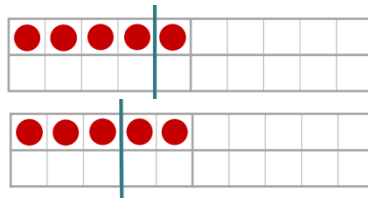
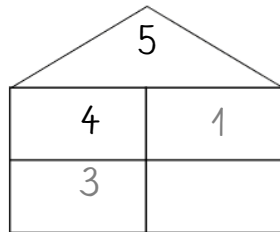
 <p>A house-shaped number 6. The roof contains the number 6. The body is divided into two rooms: the left room contains the number 4 and the right room contains the number 2. Below the house is a ten-frame with a vertical line after the 5th column. The first 6 columns of the ten-frame contain red dots,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



The image shows two identical exercises for practicing place value. Each exercise consists of a house-shaped ten-frame. The roof of the house is a triangle containing the number 7. The house has two windows: the left window contains the number 4 and the right window contains the number 3. Below the house is a ten-frame with a blue vertical line separating the first four cells from the last six cells. The top row of the ten-frame contains seven red dots, representing the number 7. 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.



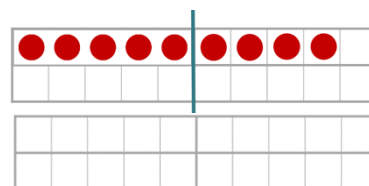
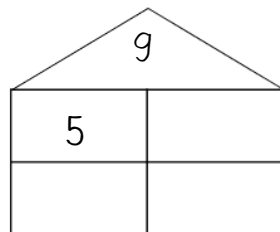
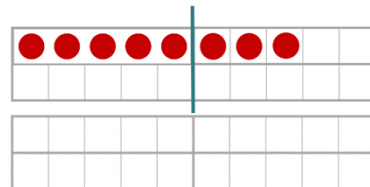
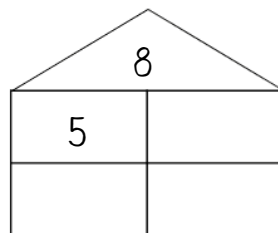
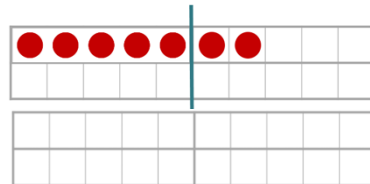
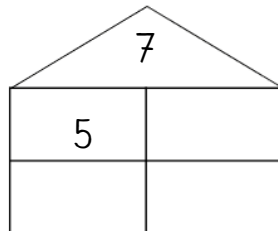
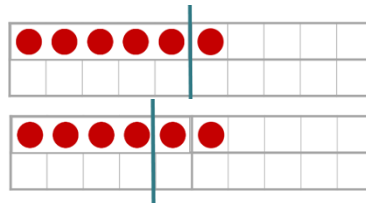
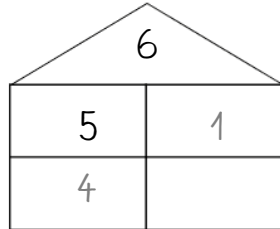
a) Was fällt dir auf? Markiere mit Forschermitteln.



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.