



KINDERGARTEN SUPPLEMENT

Set A6 Number & Operations: One Dot, Many Dots Calendar Pattern

Includes

October Calendar Pattern

A6.1

Skills & Concepts

- ★ compare sets of objects and determine whether they have the same, fewer, or more objects
- ★ use and understand the words *one/many, none/some/all, more/less, most/least, equal to/more than/less than*
- ★ describe numbers using 5 as a benchmark
- ★ describe and extend simple growing and repeating patterns
- ★ count and read numerals to 31
- ★ identify ordinal positions through the 31st

Bridges in Mathematics Kindergarten Supplement

Set A6 Number & Operations: One Dot, Many Dots Calendar Pattern

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Bridges in Mathematics is a standards-based K–5 curriculum that provides a unique blend of concept development and skills practice in the context of problem solving. It incorporates the Number Corner, a collection of daily skill-building activities for students.

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Set A6 ★ October Calendar Pattern



CALENDAR GRID

One Dot, Many Dots

Overview

This set of Calendar Grid markers replaces the student-made markers in the month of October, and provides opportunities for kindergartners to count and compare sets to 31.

Skills & Concepts

- ★ compare sets of objects and determine whether they have the same, fewer, or more objects
- ★ use and understand the words *one/many, none/some/all, more/less, most/least, equal to/more than/less than*
- ★ describe numbers using 5 as a benchmark
- ★ describe and extend simple growing and repeating patterns
- ★ count and read numerals to 31

You'll need

- ★ Calendar Grid pocket chart
- ★ Day, Month, and Year Calendar Grid cards
- ★ One Dot, Many Dots Calendar Markers (available at <http://gotomlc.org/calmarkers>) Print 1 copy of the calendar marker sheets in color, single-sided, on white cardstock. Cut the calendar markers apart and laminate if desired.
- ★ Comparison Word Resource Cards (pages A6.7–A6.11, see Advance Preparation)
- ★ 2 pieces of lined chart paper (see Advance Preparation)
- ★ red and blue Unifix cubes
- ★ chart paper or whiteboard near calendar display
- ★ helper jar containing a popsicle stick for each child with his/her name on it

Advance Preparation Run 1 copy of the Comparison Word Resource Cards on paper or cardstock. Cut the cards apart and laminate if desired. Post the 10 cards to the left of your calendar grid, or in a pocket chart near the grid if you don't have room on the wall. Finally, draw 4 columns on both sheets of lined chart paper, as shown below. Add a title and column labels to the first sheet, and post the sheet next to your calendar grid pocket chart. Keep the second sheet in reserve until the middle of the month, and then attach it to the first so you can continue to record observations through the entire month.

One Dot, Many Dots			
How Many Dots?	Red	Blue	Comparison

October Calendar Pattern (cont.)

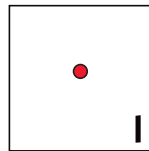
Background for the Teacher: Growing Patterns While we often introduce patterns as sequences composed of core units (e.g., AB, ABB, ABC, and so on) that repeat over and over, it is important for young learners to understand that patterns can also be sequences of shapes or numbers that grow in some predictable way. One Dot, Many Dots is a simple growing pattern that adds 1 dot per day to a growing collection. However, if you examine the first few markers in the sequence, you can observe a variety of other patterns as well.

October						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14

You might notice, for instance, that there is an equal number of red and blue dots on every even-numbered marker. Every fourth marker, starting with Marker 1, displays dots in only one color, and the colors alternate. Marker 1 shows one red dot. Marker 5 shows five blue dots. Marker 9 shows nine red dots, Marker 13 shows thirteen blue dots, and so on. Then there is the fact that the dots are looped in groups of 5 to make them easier to count. As the month unfolds, students might notice that every fifth marker, starting with Marker 5, another loop appears. While some of your students may benefit primarily from the daily opportunities to count and compare sets, rest assured that others will discover some of the patterns mentioned here, as well as others, especially if you are alert to the many possibilities.

Introducing the One Dot, Many Dots Calendar Grid Pattern: Day 1

Open your first Number Corner lesson in October by directing students' attention to the calendar grid. Explain that you will put up a new calendar marker as each day of October passes. Place the first marker in the correct pocket, and ask children to pair-share observations. What do they notice about this marker? After a few moments, pull popsicle sticks from your helper jar to call on children to share their observations with the class.



Students It's a tiny little circle.

Red—little red dot.

It's so little I can hardly see it!

Then ask children to predict what they might see on the marker for the following day.

Students Maybe another dot!

It could be a blue or green one

Or maybe a square not a circle.

I think it will be two dots!

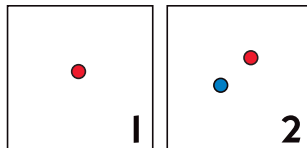
October Calendar Pattern (cont.)

Teacher *Why do you think we might see two dots tomorrow, Hannah?*

Hannah *Because today is number 1 and there's 1 dot. Tomorrow will be 2, so maybe there will be 2 dots.*

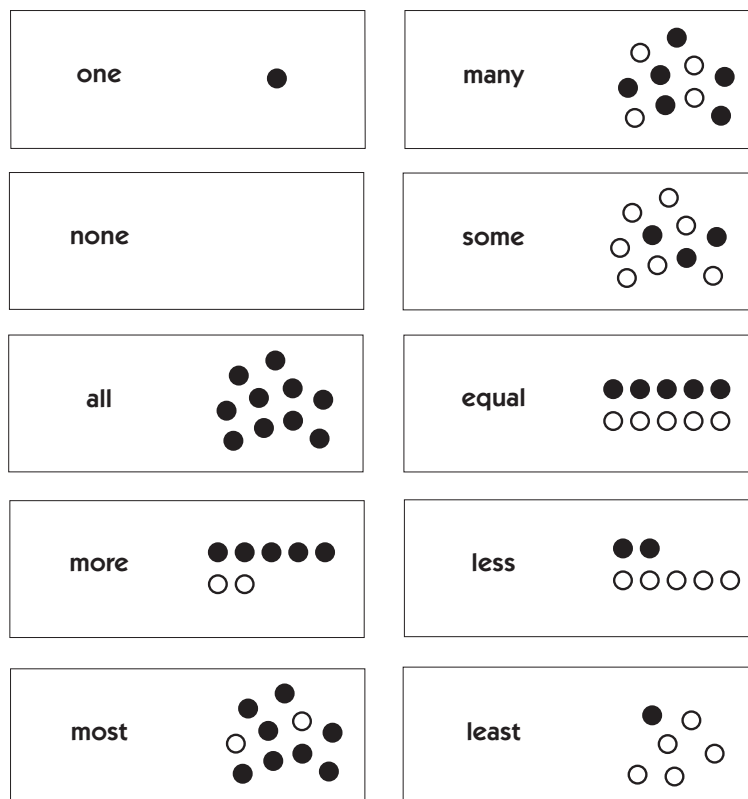
Introducing the One Dot, Many Dots Calendar Grid Pattern: Day 2

The next day, invite children to predict what Marker 2 will show, and then place it on display in the correct pocket. Ask children to pair-share observations, and then call on a few volunteers to share with the group.



Students *It is two dots—I was right!
One of them is red. The other one is blue.
First 1 dot. Now 2. Maybe there will be 3 tomorrow.
Maybe another color, too, like green.*

Next, draw children's attention to the word cards you have posted near the calendar grid. Explain that these are words people use when they count and compare sets of objects. Choose 2 or 3 of the cards to read to the children. As you read each, challenge the students to use it to describe the markers you have posted so far.



October Calendar Pattern (cont.)

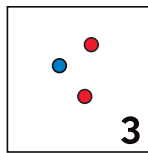
Teacher So there are an equal number of reds and blues on this marker?

Justin Yes! One of red and one of blue.

Teacher Equal is on one of our word cards. Let's see—here it is.

Continuing through October with the Calendar Grid

The next day, have children predict what Marker 3 will show, and then place it on display in the correct pocket. Have students pair-share observations, and then call on a few volunteers to share with the group. During the discussion, introduce a couple more word cards, and challenge children to utilize these words in their observations.



Students 3 dots today, I knew it!

There are more reds.

Some are red and one is blue.

All of them are round.

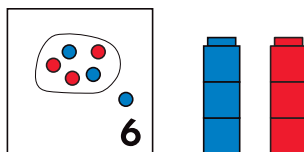
Then draw students' attention to the recording chart you have prepared. Work with input from the class to enter information about the first 3 markers.

One Dot, Many Dots			
How Many Dots?	Red	Blue	Comparison
1	1	0	There is only 1 red dot
2	1	1	Red and blue are equal. $1 = 1$
3	2	1	There are more reds than blues. $2 > 1$

Over the next few days, introduce the rest of the word cards and encourage children to use them as they make their predictions and observations about the markers. Once the marker for the day has been posted, have students count the total number of dots on that marker, and compare the sets of reds and blues that appear. Work with their input to record a comparison statement, along with the other information about the dots, on the chart.

Note Starting on the 4th or 5th day, ask a volunteer to set out 1 red or blue Unifix cube for each dot on the day's marker, and then link the cubes into stacks by color. Have the other students count along with your volunteer, and then place the stacks on display for all to see. This will make it easier for students to see and compare the quantities, and will become increasingly important as the number of dots increases through the month.

October Calendar Pattern (cont.)



Students *It's 3 reds and 3 blues today!*

They're the same number.

The cubes come up to the same place.

They're equal!

Here are some questions and prompts to use throughout the month:

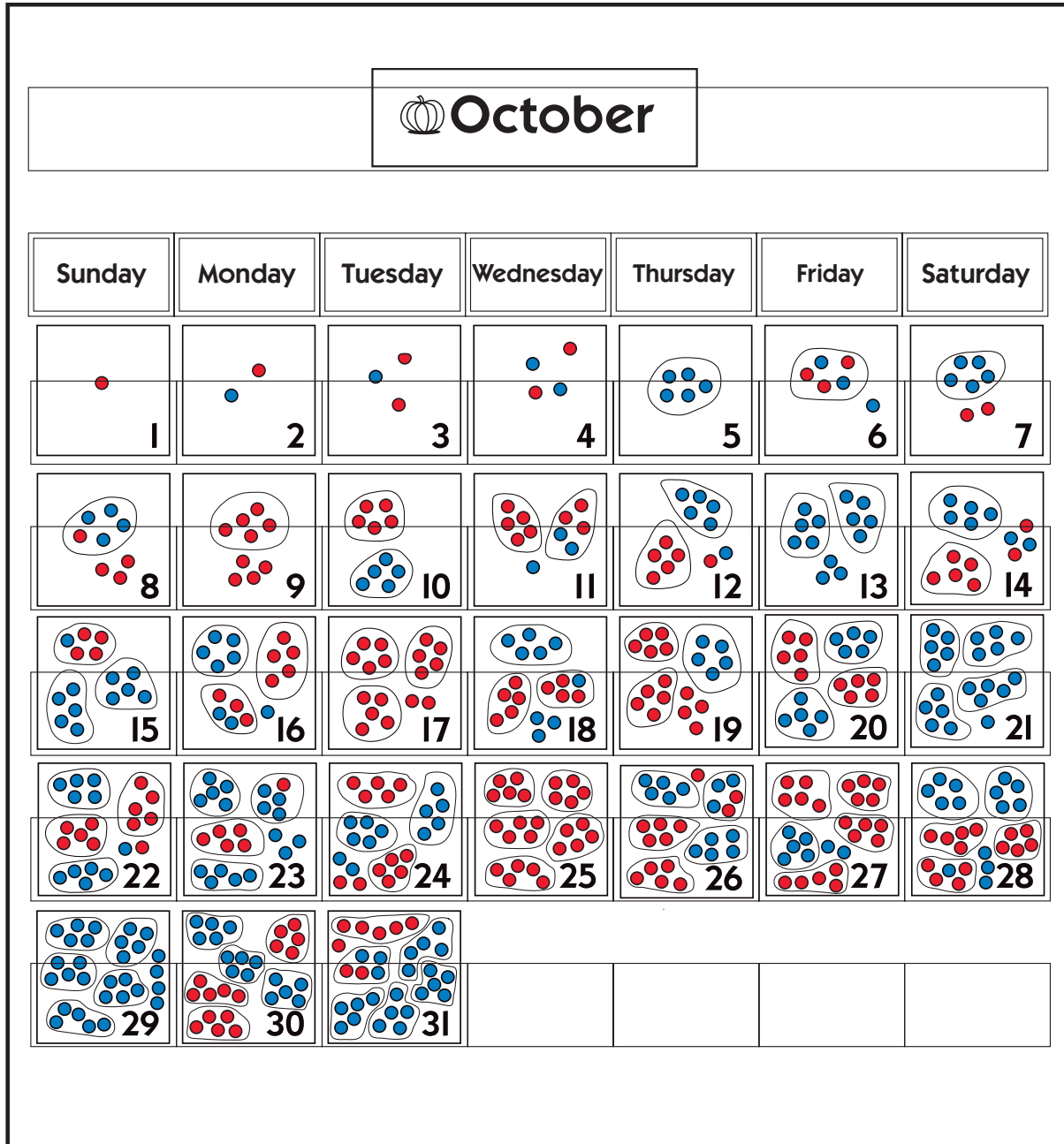
- How many dots are there on the marker today? How many are red? How many are blue?
- Are there more blue or more red dots? How do you know?
- How many dots will we see on tomorrow's marker? How do you know?
- Do you think there will be more reds, more blues, or an equal number of each color on our next marker? Why?
- Are there any markers where all of the dots are the same color? Which ones? Do you think there will be other markers like that this month? Can you point to where you think the next one will show up? Why do you think it will be there?
- Which markers so far have an equal number of red and blue dots? Do you think we'll see any other markers like that this month? Which ones? How do you know?
- Which marker so far has the most blue dots? The least or fewest blue dots? The most red dots? The least or fewest red dots?

Extensions

- After the fifth of the month, work with children to count the quantities of dots by 5's and 1's, as well as 1 by 1 each day.
- In addition to recording a comparison statement for the marker each day, write an equation to reflect the blues, the reds, and the total (e.g., $3 + 3 = 6$).
- It won't be long before some students discover that every other marker in the sequence is composed of an equal number of red and blue dots. When this comes up, take the opportunity to introduce the idea of even numbers as quantities where each member of the set has a partner.
- Encourage children to use red and blue Unifix cubes to build their predictions about upcoming markers. Prediction trains can be placed near the calendar grid and examined the following day as the next marker is posted.

October Calendar Pattern (cont.)

NOTE Below is a representation of the October calendar grid. The full-size calendar markers are available at <http://gotomlc.org/calmarkers>.



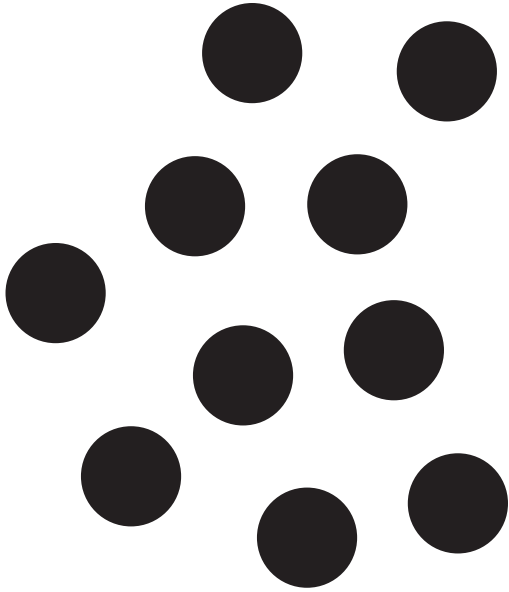
Comparison Word Resource Cards page 1 of 5



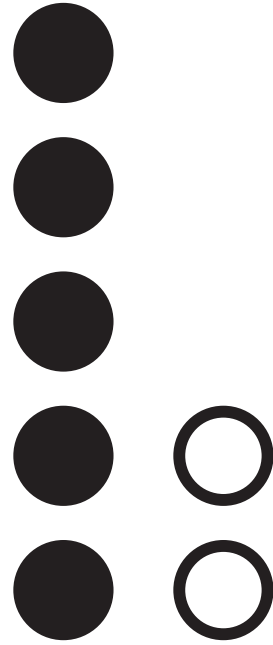
one

none

Comparison Word Resource Cards page 2 of 5

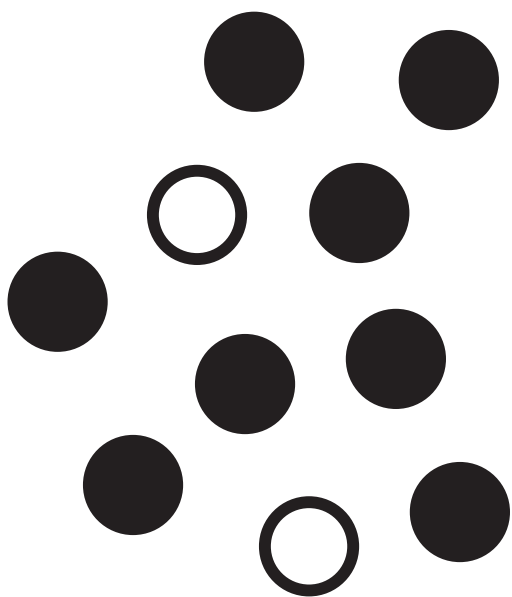


all

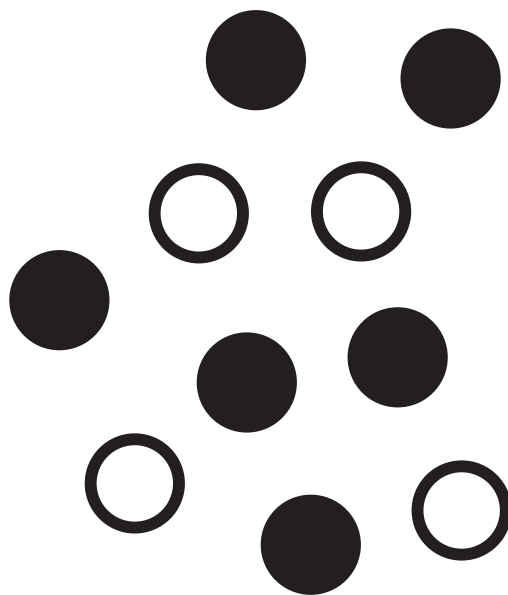


more

Comparison Word Resource Cards page 3 of 5

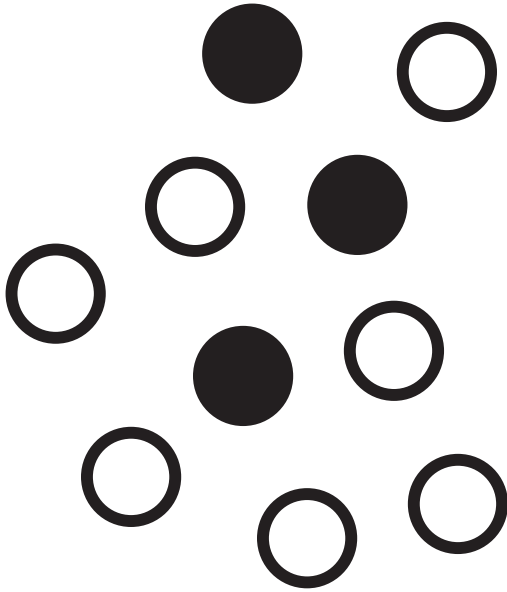


most

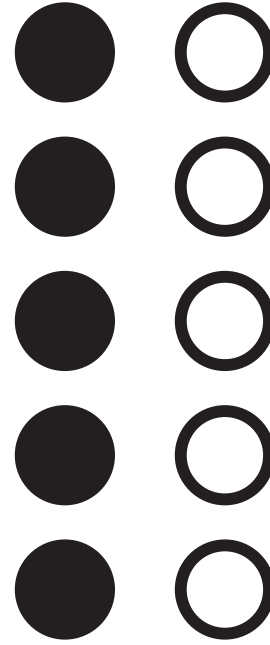


many

Comparison Word Resource Cards page 4 of 5

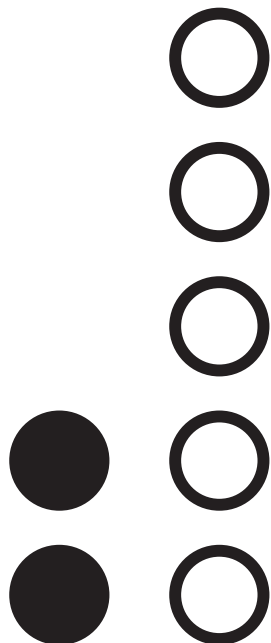


some

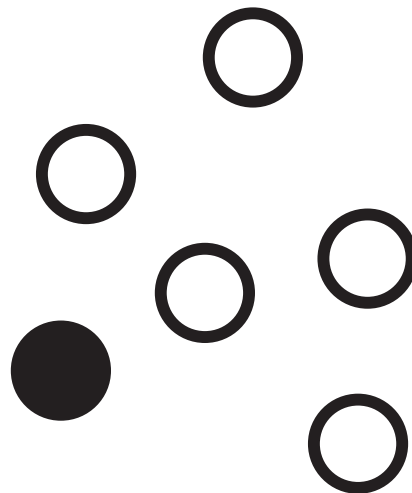


equal

Comparison Word Resource Cards page 5 of 5



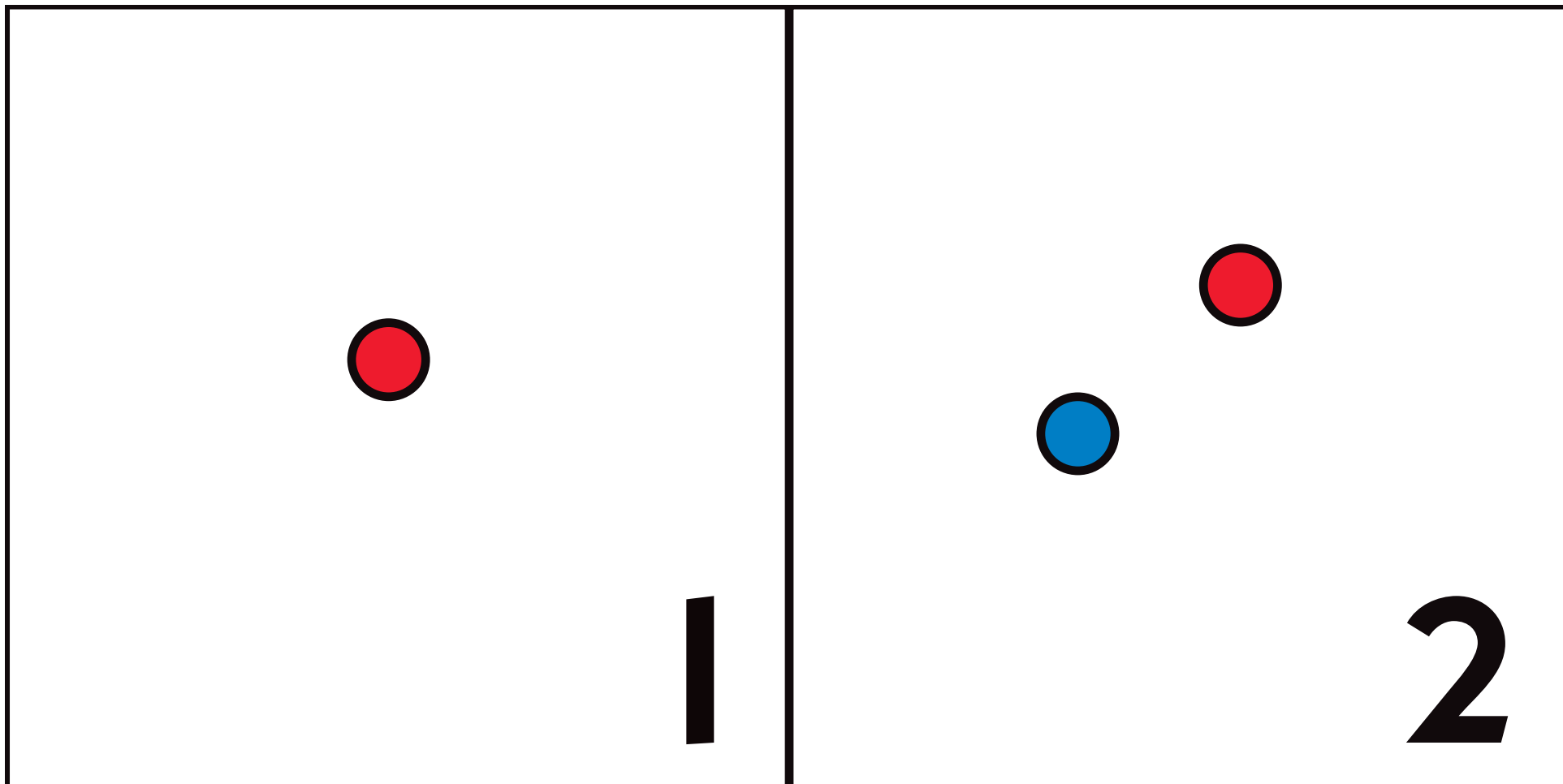
less



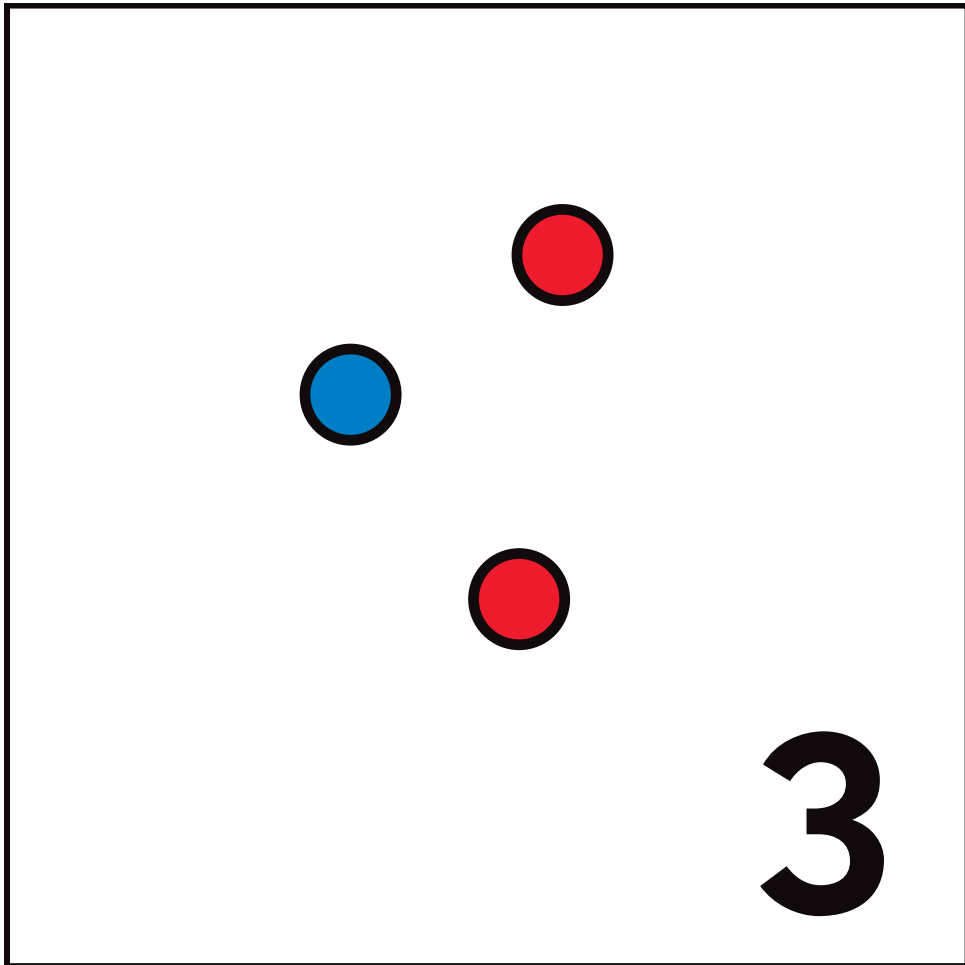
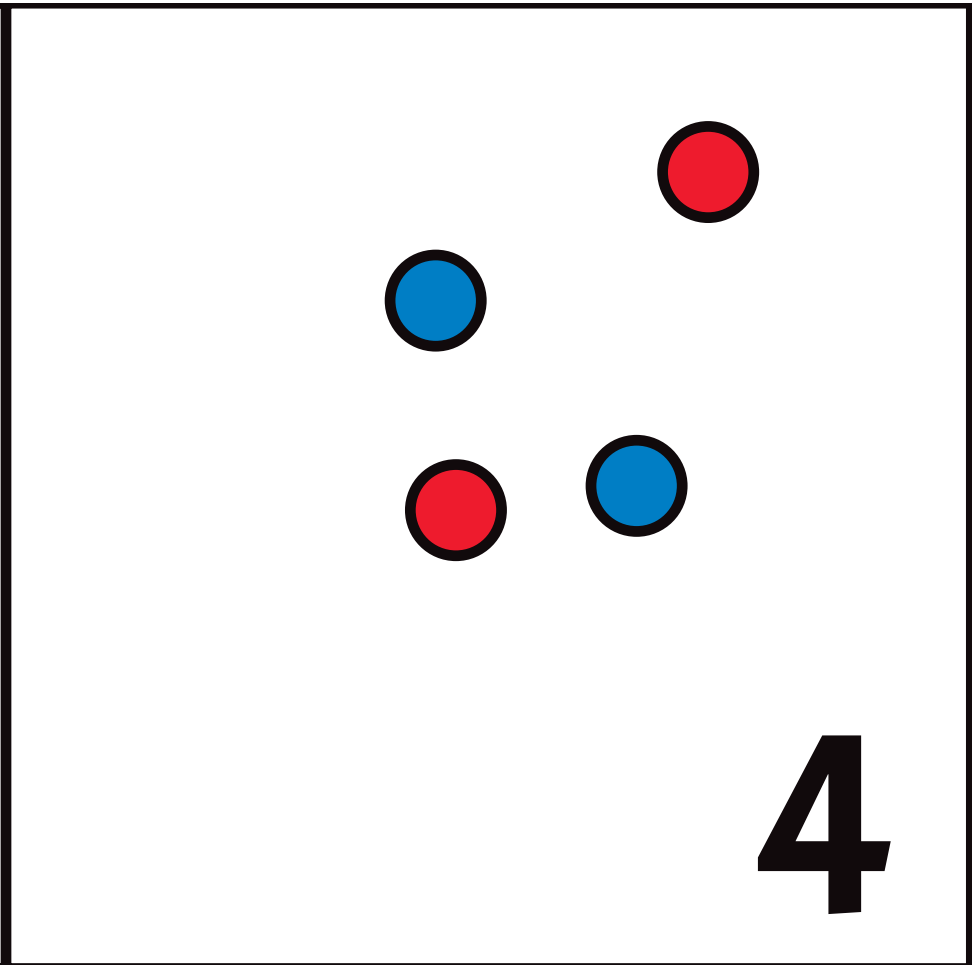
least

Print 1 copy of the calendar marker sheets in color, single-sided, on white cardstock. Cut the calendar markers apart and laminate if desired.

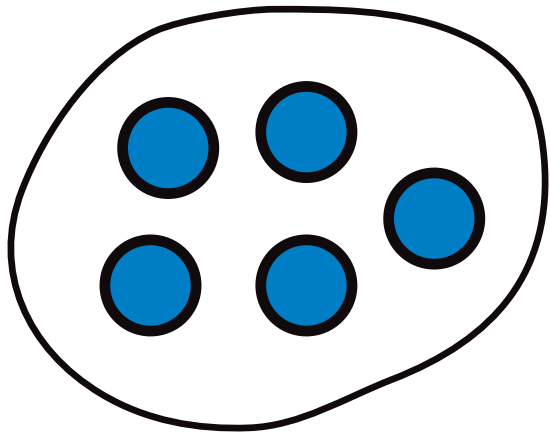
October One Dot, Many Dots Calendar Markers Sheet 1 of 16



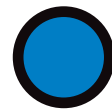
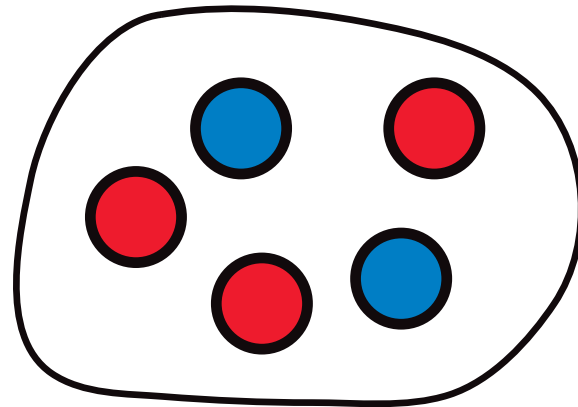
October One Dot, Many Dots Calendar Markers Sheet 2 of 16

 <p>3</p>	 <p>4</p>
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October One Dot, Many Dots Calendar Markers Sheet 3 of 16

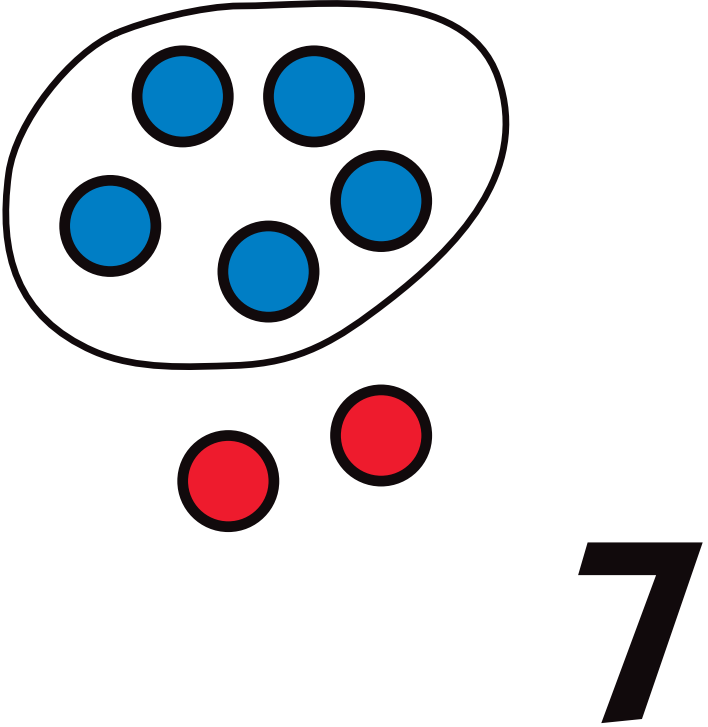
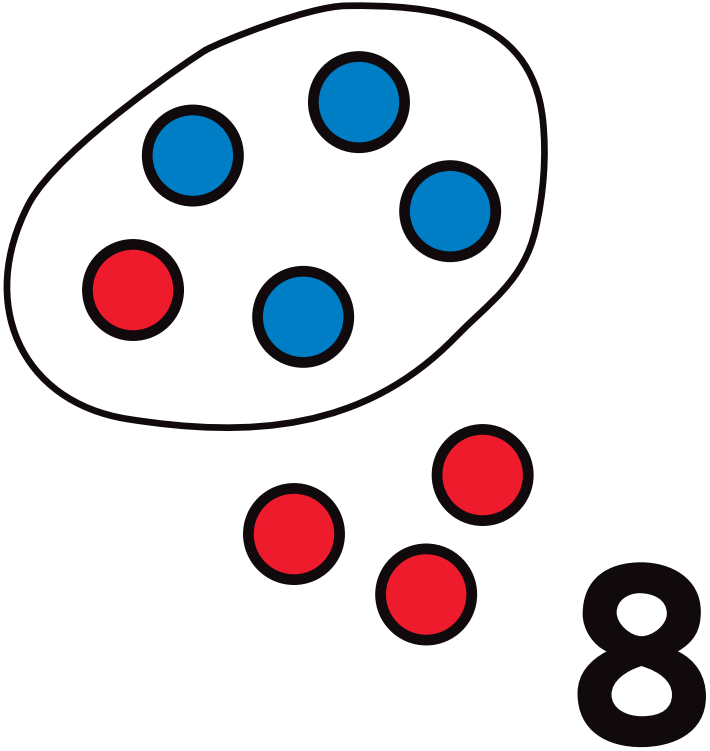


5

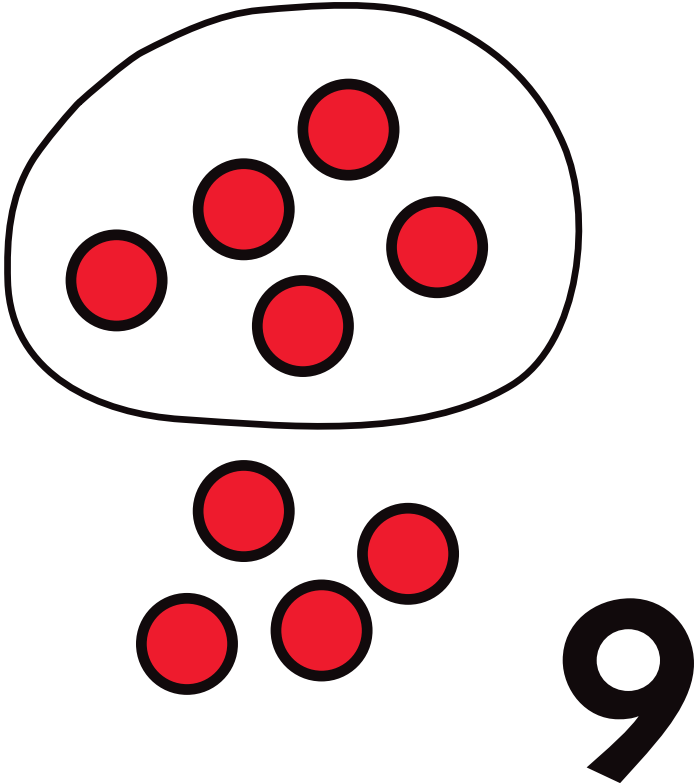
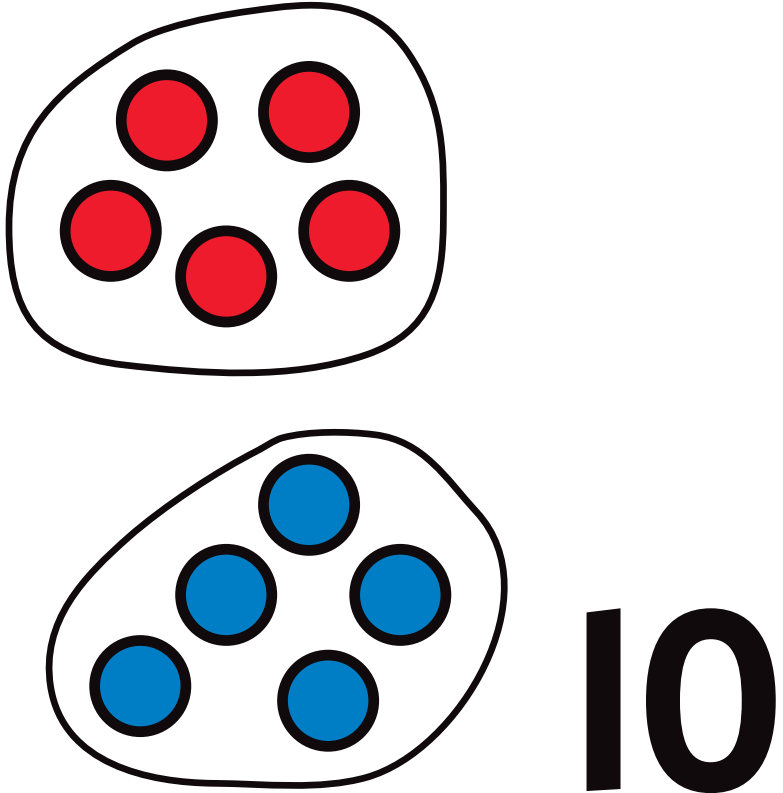


6

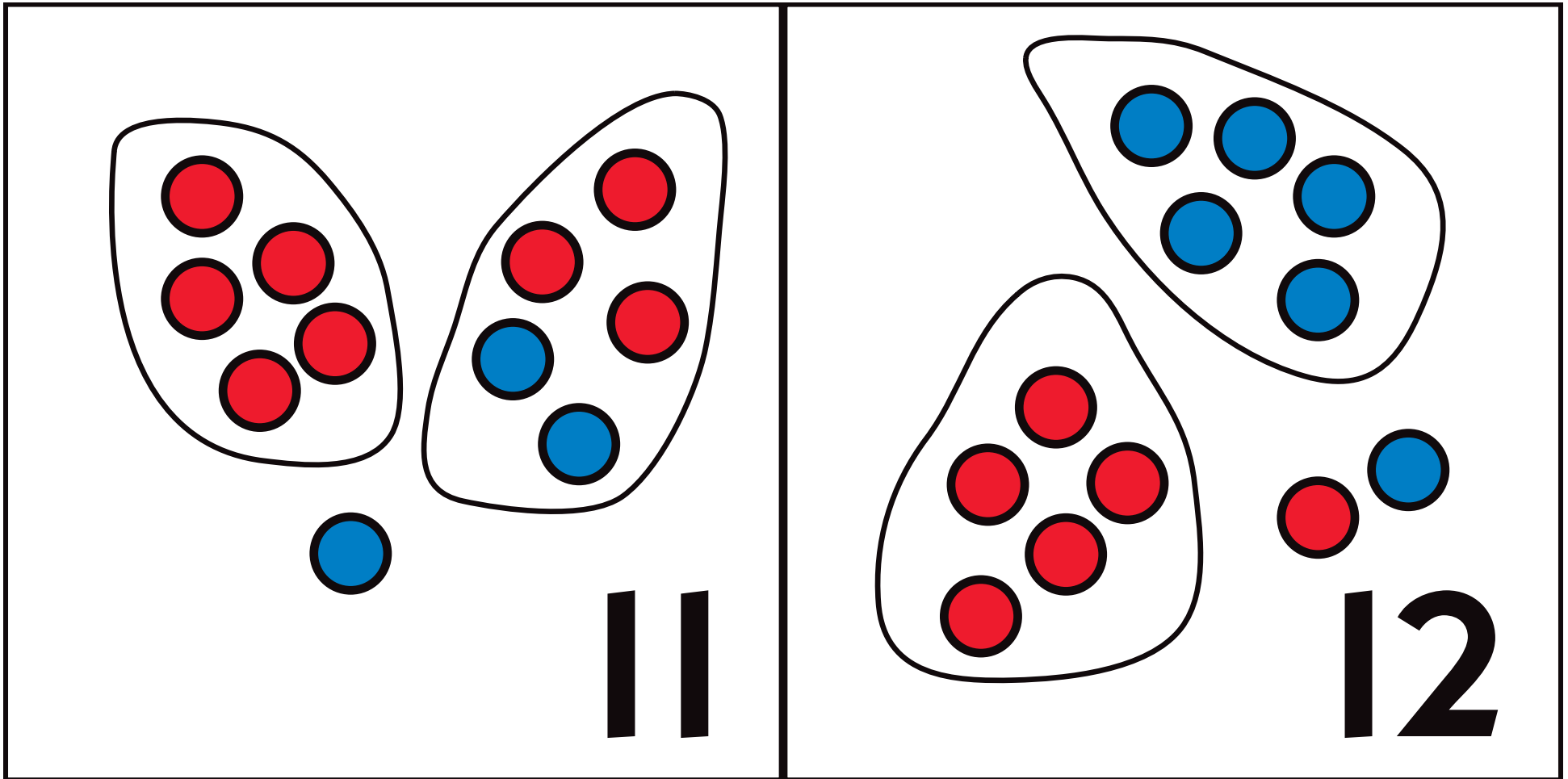
October One Dot, Many Dots Calendar Markers Sheet 4 of 16

 <p>7</p>	 <p>8</p>
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October One Dot, Many Dots Calendar Markers Sheet 5 of 16

 <p>9</p>	 <p>10</p>
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October One Dot, Many Dots Calendar Markers Sheet 6 of 16



October One Dot, Many Dots Calendar Markers Sheet 7 of 16

The image displays two calendar marker cards. The left card is for the number 13 and features two groups of 5 blue dots each, with a group of 3 blue dots below them. The number 13 is printed in large black font. The right card is for the number 14 and features two groups of 5 dots each (3 blue and 2 red), with a group of 4 dots (2 blue and 2 red) to the right. The number 14 is printed in large black font.

October One Dot, Many Dots Calendar Markers Sheet 8 of 16

The image shows two large rectangular boxes side-by-side. The left box contains three groups of five dots each, totaling 15 dots. The top group has two red dots and three blue dots. The bottom-left group has five blue dots. The bottom-right group has five blue dots. The number '15' is printed in large black font at the bottom right of this box. The right box contains two groups of five dots each, totaling 10 dots, and one additional blue dot, totaling 16 dots. The top group has three blue dots and two red dots. The bottom group has two red dots and three blue dots. The number '16' is printed in large black font at the bottom right of this box.

October One Dot, Many Dots Calendar Markers Sheet 9 of 16

The image displays two calendar marker sheets. The left sheet is for the number 17, featuring two groups of five red dots and two individual red dots, with the number 17 printed below. The right sheet is for the number 18, featuring one group of six blue dots, one group of five red dots, one group of four red dots with one blue dot, and three individual blue dots, with the number 18 printed below.

October One Dot, Many Dots Calendar Markers Sheet 10 of 16

The image shows two calendar marker cards. The first card is for the number 19. It features two groups of 10 red dots each, and 9 individual red dots. The number 19 is written in large black font at the bottom right. The second card is for the number 20. It features two groups of 10 blue dots each. The number 20 is written in large black font at the bottom right.

October One Dot, Many Dots Calendar Markers Sheet 11 of 16

21

22

October One Dot, Many Dots Calendar Markers Sheet 12 of 16

The image displays two calendar markers. The first marker is for the number 23, featuring two groups of blue dots: one group with 5 dots and another with 3 dots, plus three individual blue dots. The second marker is for the number 24, featuring two groups of red dots: one group with 5 dots and another with 3 dots, plus four individual blue dots.

October One Dot, Many Dots Calendar Markers Sheet 13 of 16

The image displays two calendar marker sheets. The left sheet is for October 25 and features five groups of five red dots each, with the number 25 printed in large black font. The right sheet is for October 26 and features five groups of five dots each. The first four groups contain four blue dots and one red dot, while the fifth group contains five red dots. The number 26 is printed in large black font.

October One Dot, Many Dots Calendar Markers Sheet 14 of 16

The image displays two calendar marker sheets for the dates October 27 and October 28. Each date is represented by a collection of irregularly shaped containers holding colored dots. The number of dots in each container corresponds to the day of the month.

October 27: The date is represented by 27 red dots. The dots are arranged in five groups: four groups of 5 dots each and one group of 7 dots.

October 28: The date is represented by 28 dots. The dots are arranged in four groups: one group of 5 blue dots, one group of 5 red dots, one group of 5 red dots, and one group of 3 blue dots.

October One Dot, Many Dots Calendar Markers Sheet 15 of 16

The image displays two calendar marker sheets for the month of October. The first sheet, for the 29th, features four groups of five blue dots and one group of four blue dots, with the number 29 printed in large black font. The second sheet, for the 30th, features four groups of five red dots, with the number 30 printed in large black font.

Print 1 copy of the calendar marker sheets in color, single-sided, on white cardstock. Cut the calendar markers apart and laminate if desired.

October One Dot, Many Dots Calendar Markers Sheet 16 of 16

