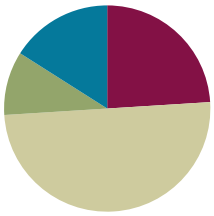
Lesson 13

Objective: Represent decomposition and composition addition stories to 6 with drawings and equations with no unknown.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(5 minutes)
Concept Development	(25 minutes)
Student Debrief	(8 minutes)
Total Time	**(50 minutes)**



Fluency Practice (12 minutes)

- Counting the Say Ten Way with the Rekenrek **K.NBT.1** (3 minutes)
- Dot Cards of 6 **K.OA.3** (3 minutes)
- Draw More to Make 6 **K.CC.2** (6 minutes)

Counting the Say Ten Way with the Rekenrek (3 minutes)

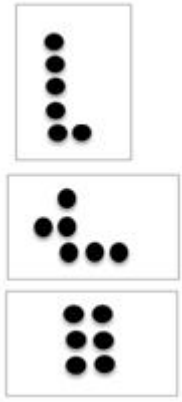
Materials: (T) 20-bead Rekenrek

Note: This activity is an extension of students' previous work with the Rekenrek in anticipation of working with teen numbers.

Conduct the activity as outlined in Lesson 5.

Dot Cards of 6 (3 minutes)

Materials: (T/S) Dot cards of 6 (Fluency Template 1)



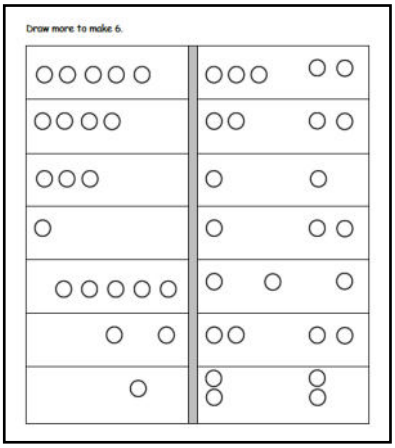
Note: This activity deepens students' knowledge of embedded numbers and develops part–whole thinking.

T: (Show a card.) How many do you see?
S: 6.
T: How did you see them in two parts?
S: 5 on this side and 1 on that side. → 2 down and 4 up. → 3 up and 3 down.

Continue with other cards of 6. Distribute the cards to students for partner sharing time.

Have them pass on the card at a signal, and repeat with a new card.

Draw More to Make 6 (6 minutes)



Materials: (S) Make 6 (Fluency Template 2)

Note: This activity further develops students' understanding of the decompositions of 6.

After giving clear instructions and completing the first few problems together, allow students time to work independently. Encourage them to do as many problems as they can within a given time frame. Go over the answers, and direct students to energetically shout, "Yes!" for each correct answer.

Application Problem (5 minutes)

Materials: (S) Personal white board, 6 linking cubes

4 silly seals were splashing in the water. Show the silly seals with your linking cubes. 2 more silly seals came to splash. Show the new seals. How many silly seals are splashing in the water now?

Use your cubes, and talk to your partner about the seals. Can you write about the silly seals in a number bond?

Note: Composition of the number 6 serves as an anticipatory set for today's lesson, providing students an opportunity to work with concrete materials before moving into the pictorial stage.

NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

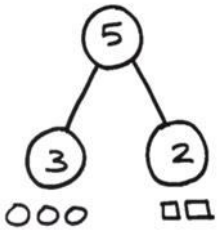
Scaffold the Application Problem for English language learners by providing sentence starters such as: "___ seals and ___ seals is ___ seals" and "___+ ___ =___." This supports their oral response to the problem's prompt.

Concept Development (25 minutes)

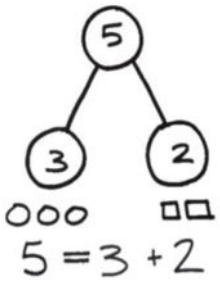
Materials: (T) Magnetic shapes (optional) (S) Personal white board

Draw 2 squares and 3 circles on the board.

- T: Noah loves to play with magnets on his refrigerator. He has these magnets. (Show the shapes on the board.) What does Noah have on his refrigerator?
- S: He has some shape magnets. → There are some circles and squares. → There are 5 magnets in all.
- T: Copy these shape magnets onto your personal white board. Hmm. Remember when we practiced making number bonds from shape pictures? Can anyone help me make a number bond about our picture? (Allow students to offer guidance in creating a number bond on the board, starting with the total and then designating the parts.)



T: I want to write about this in the special Math Way in a number sentence. (Write 5 = 3 + 2 under the number bond.)



T: What does this 5 tell us about?

S: The 5 tells how many shape magnets Noah has in all.

T: I showed the parts of our picture like this: 3 + 2. Where does the 3 come from?

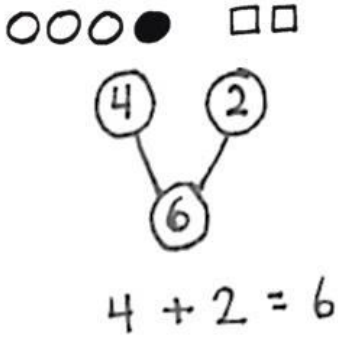
MP.4

S: The circles!

T: Where does the 2 come from?

S: The squares!

T: Yes, there are 5 shape magnets on Noah's refrigerator. 2 are squares, and 3 are circles. 5 equals 2 and 3 together! Write the number sentence on your board. (Circulate to ensure understanding.)



T: Erase your boards. Noah's friend gave him another circle magnet. I'll draw it on the board. Copy all of the shapes onto your own board. What do you notice?

S: Now we have 4 circles! → We have 2 squares and 4 circles!

T: Count the sets of shapes, and write the numbers underneath your pictures. Let's make a number bond about our new picture. (Allow students to offer guidance in creating the number bond.) Who can tell me about the number sentence?

S: 4 shapes and 2 more shapes make 6 in all.

T: Yes! We can write it like this: 4 + 2 = 6.

Talk students through the referents once again as was done with 5 = 3 + 2 (a referent is the item that the numerals represent). Switch the order of the addends, and lead them through the referents again. Have them notice which number bond might better show the total amount made into parts and which might better show the parts put together to make the total.

Lead students in more examples with totals of 6 as time allows. Release them to work in pairs as they show independence.

NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Ask students working above grade level to explain why they think that 5 = 2 + 3 can also be written as 2 + 3 = 5 without changing the picture of the 3 squares and 2 circles on the board. Encourage them to use their math words.

Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted time.

Note: The final question asks students to write a number sentence. This is not a mastered skill, but this question provides an opportunity for students who are ready to write number sentences independently.

Student Debrief (8 minutes)

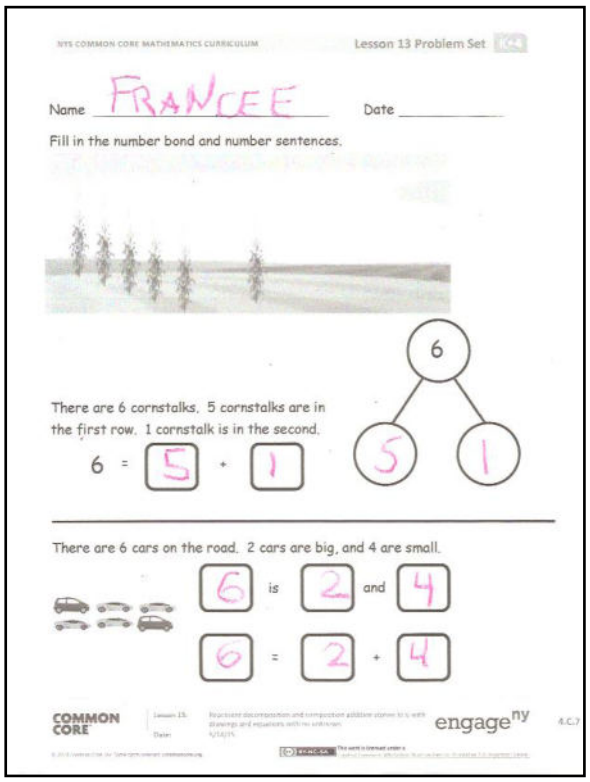
Lesson Objective: Represent decomposition and composition addition stories to 6 with drawings and equations with no unknown.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- Look at the cornstalk problem. Did your number bond match your neighbors'?
- How did your drawings help you to make your number sentences?
- How did the number bond help you to make your number sentence? How are number bonds and number sentences alike or similar?
- Does it matter if you put the parts first or the whole first in a number sentence?
- Did you notice anything special about the parts in the gecko problem? (The parts were the same.) How do you know which part shows the spotted geckos? Does it matter?
- Think back to our silly seals. Can you think of a number sentence to describe them?


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 13 Problem Set K•4

Name FRANCEE Date _____

Fill in the number bond and number sentences.

There are 6 cornstalks. 5 cornstalks are in the first row. 1 cornstalk is in the second.

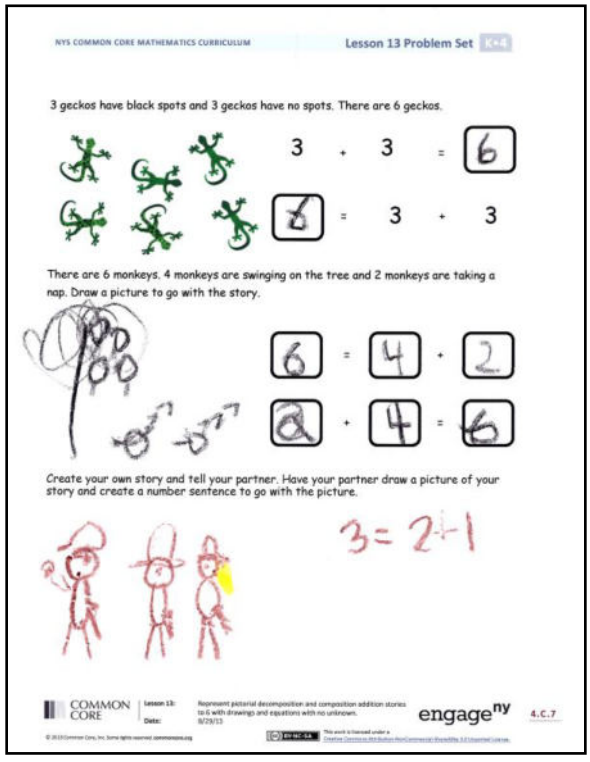
6 = 5 + 1

There are 6 cars on the road. 2 cars are big, and 4 are small.

6 is 2 and 4

6 = 2 + 4

COMMON CORE engage^ny 4.C.7


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 13 Problem Set K•4

3 geckos have black spots and 3 geckos have no spots. There are 6 geckos.

3 + 3 = 6

6 = 3 + 3

There are 6 monkeys. 4 monkeys are swinging on the tree and 2 monkeys are taking a nap. Draw a picture to go with the story.

6 = 4 + 2

2 + 4 = 6

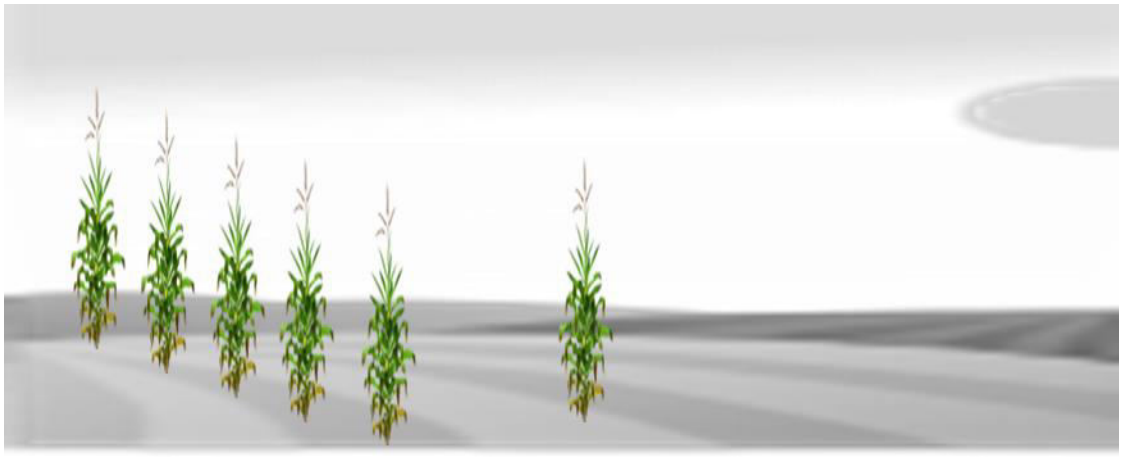
Create your own story and tell your partner. Have your partner draw a picture of your story and create a number sentence to go with the picture.

3 = 2 + 1

COMMON CORE engage^ny 4.C.7

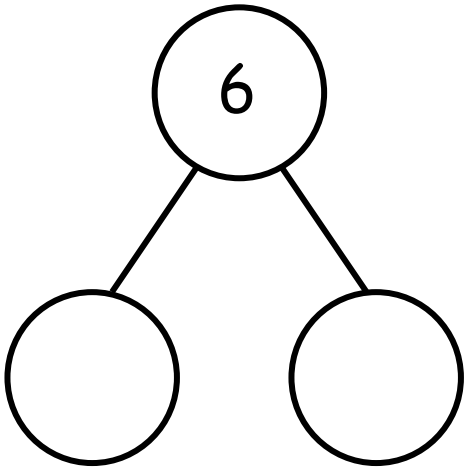
Name _____ Date _____

Fill in the number bond and number sentences.



There are 6 cornstalks. 5 cornstalks are in the first row. 1 cornstalk is in the second.

6 = ☐ + ☐

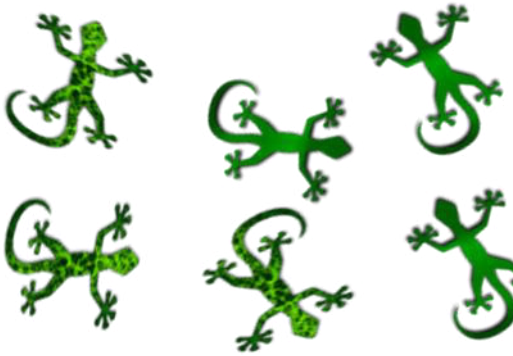


There are 6 cars on the road. 2 cars are big, and 4 are small.

☐ is ☐ and ☐

☐ = ☐ + ☐

3 geckos have black spots, and 3 geckos have no spots. There are 6 geckos.



3 + 3 = ☐

☐ = 3 + 3

There are 6 monkeys. 4 monkeys are swinging on the tree, and 2 monkeys are taking a nap. Draw a picture to go with the story.

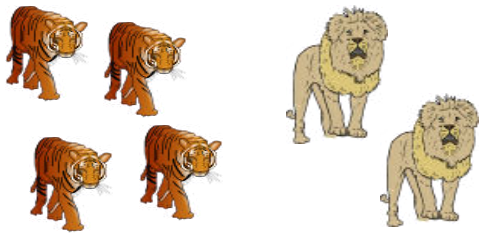
☐ = ☐ + ☐

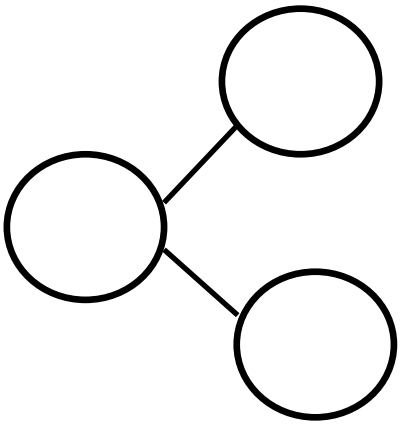
☐ + ☐ = ☐

Create your own story, and tell your partner. Have your partner draw a picture of your story and create a number sentence to go with the picture.

Name _____ Date _____

There are 6 animals. 4 are tigers, and 2 are lions.
Fill in the number sentences and the number bond.

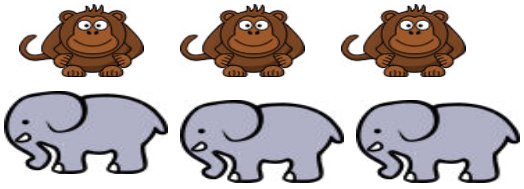


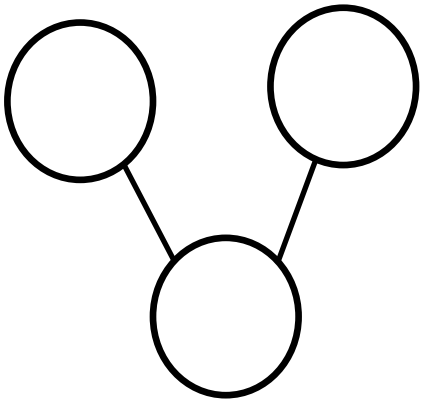


☐ is ☐ and ☐

☐ = ☐ + ☐

There 3 are monkeys and 3 elephants. All 6 animals are going into the circus tent. Fill in the number sentences and the number bond.

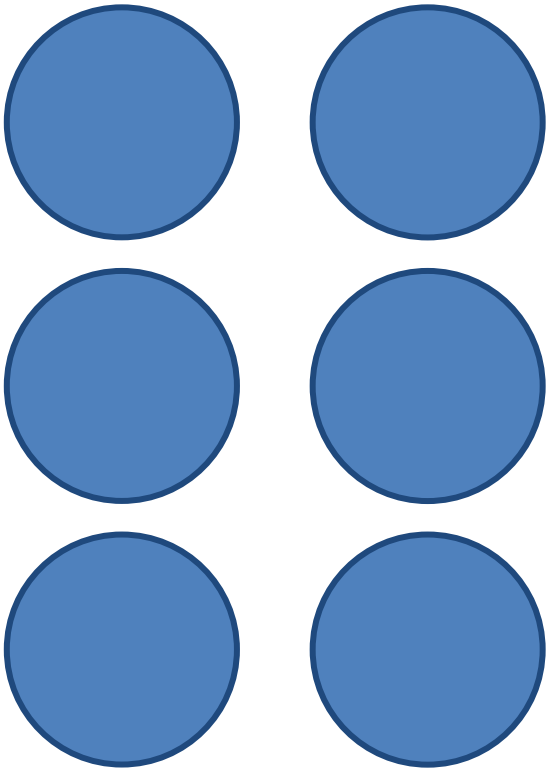




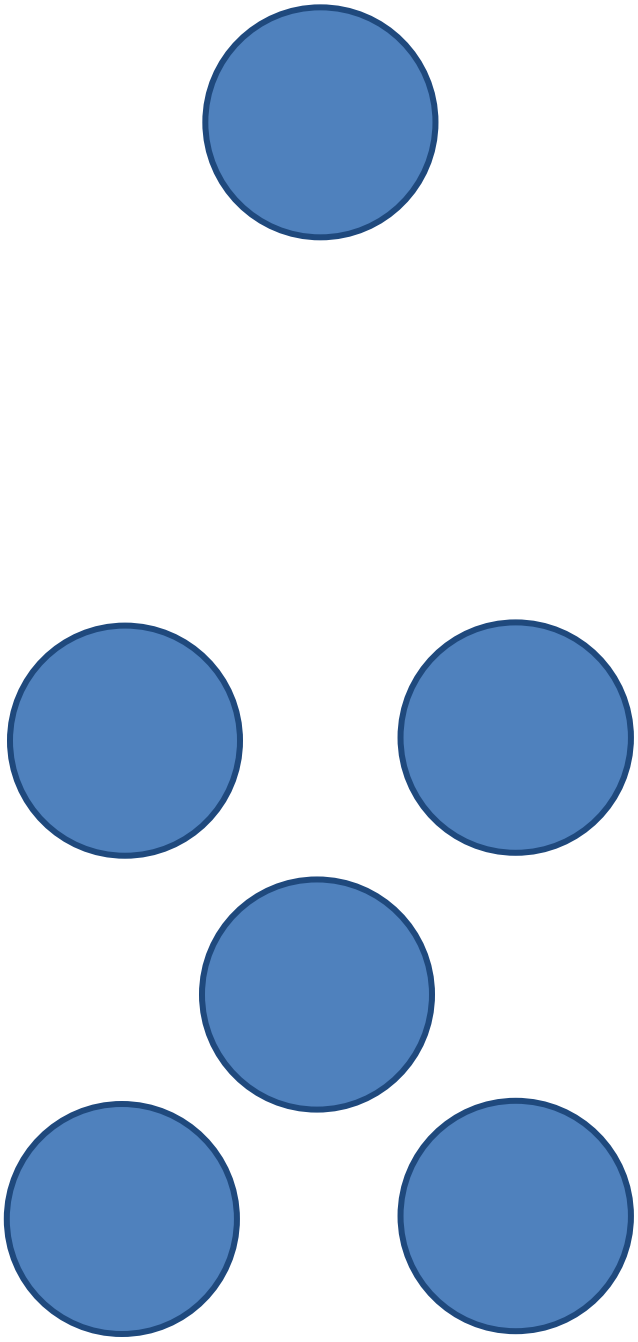
☐ and ☐ is ☐

☐ + ☐ = ☐

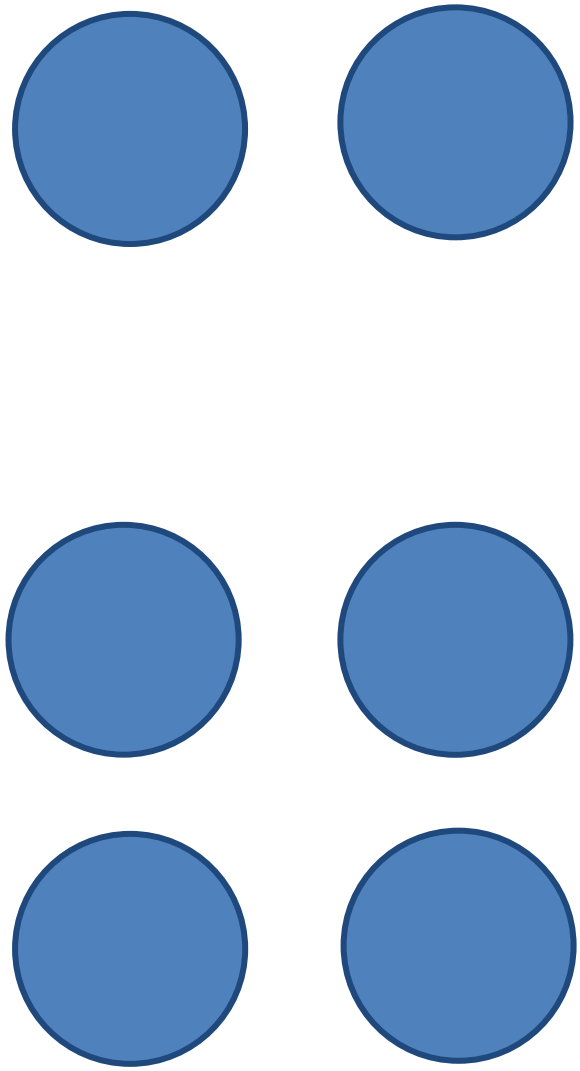
On the back of your paper, draw some animals. Make a number bond to match your picture.



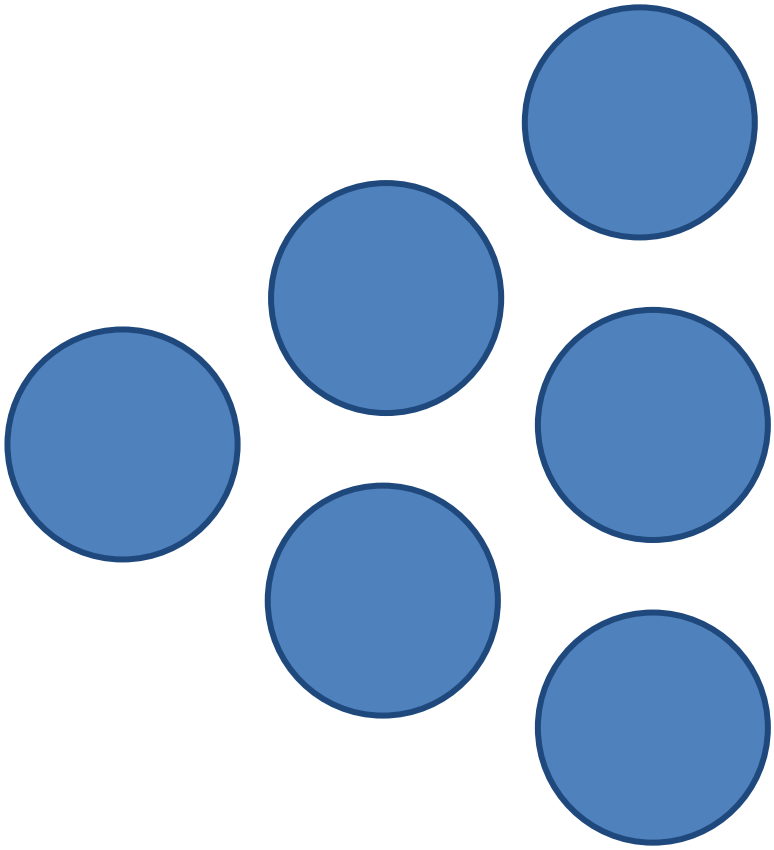
dot cards of 6



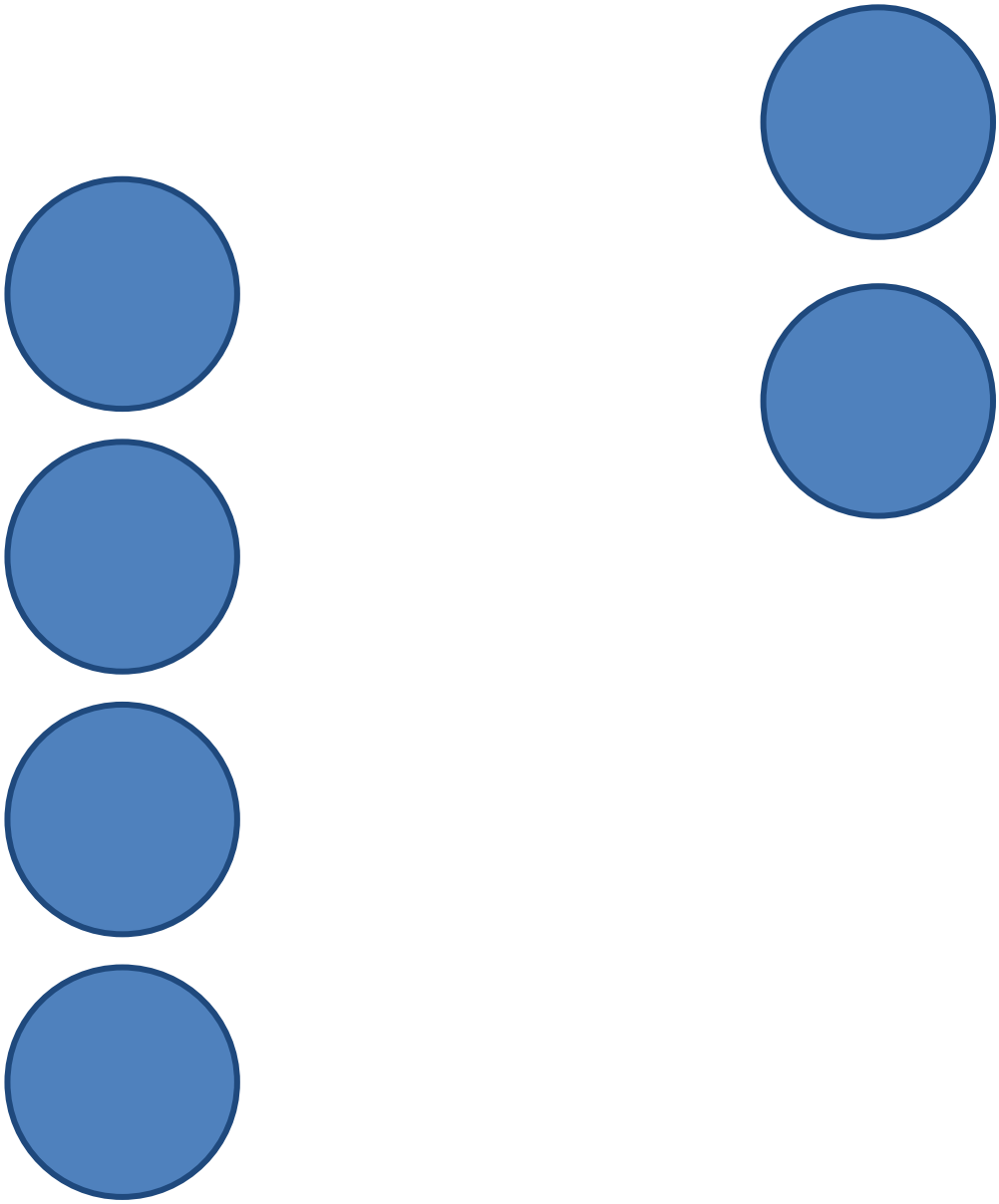
dot cards of 6



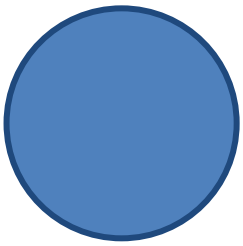
dot cards of 6

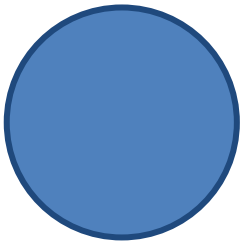


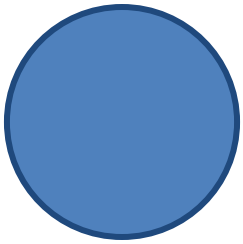
dot cards of 6

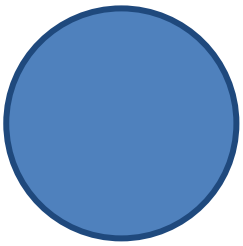


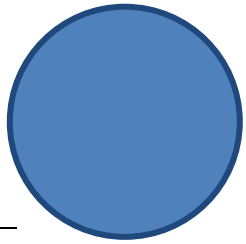
dot cards of 6

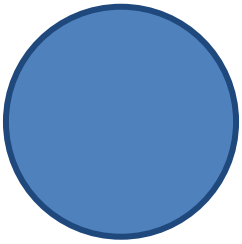




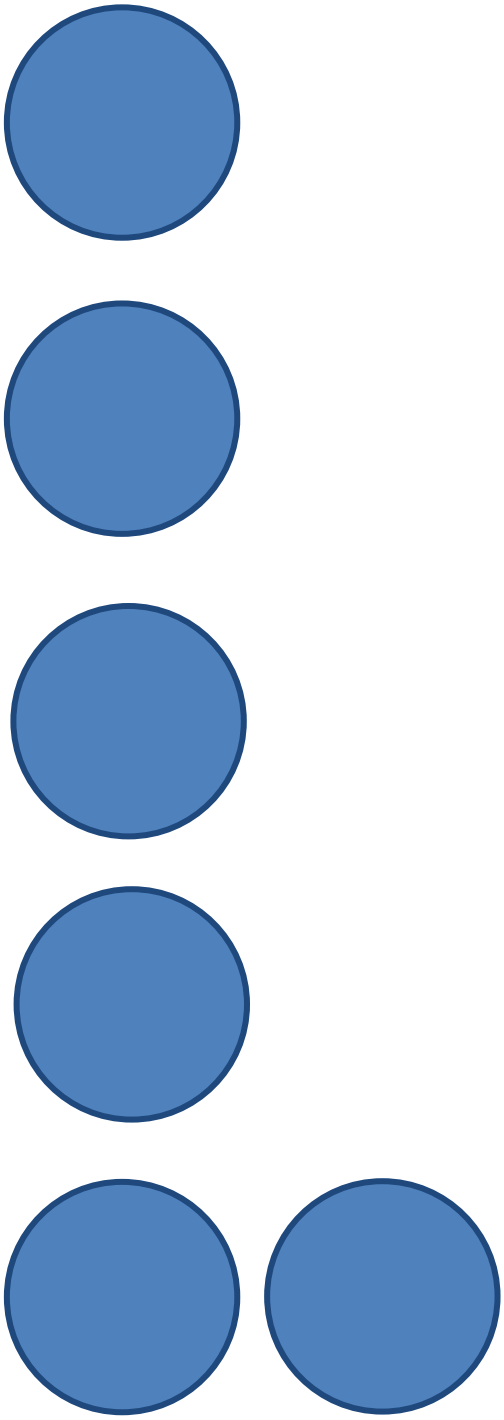






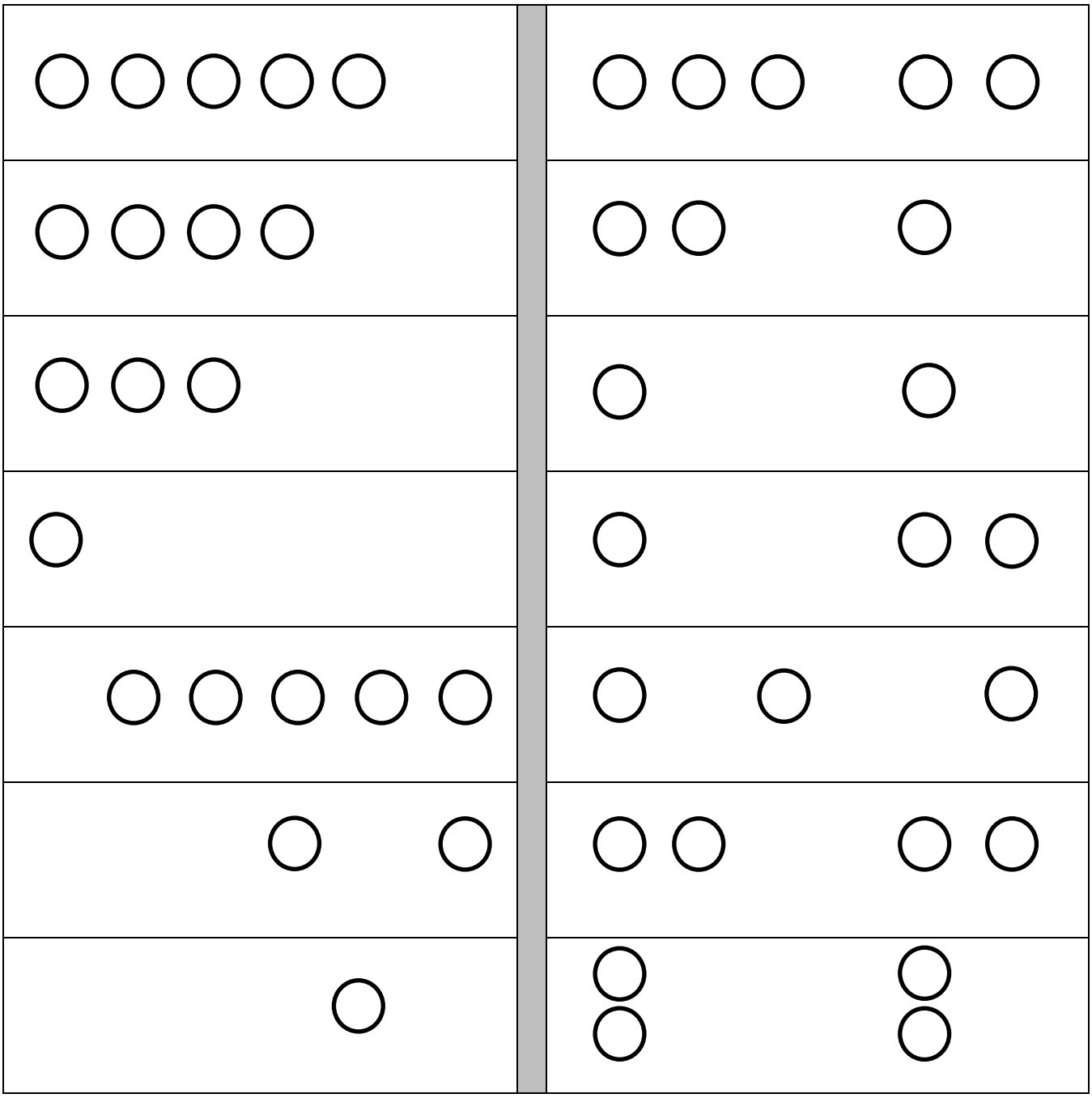


dot cards of 6



dot cards of 6

Draw more to make 6.



make 6