ACTIVITIES ON DEVELOPING MULTIPLICATION AND DIVISION

The resources for dot cards and arrays are attached to this document for the teacher to use them when engaging the learners with the activities.

1. EQUAL GROUPS

1.1 Making equal groups [30 minutes]

Individual or group work

Focus: Assist children in forming equal groups and to focus on the number of groups, the number of items in each group

Learners are given 12 counters and are asked to make three groups with four in each group.

How many groups? / How many in each group?

1.2 Describing equal groups [30 minutes]

Counters/ unifix cubes/ containers

Individuals

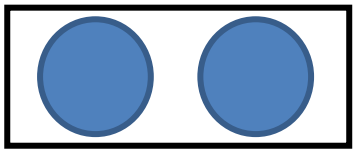
Each learner is given 10 counters and 2 containers, ask them to share it equally into the containers, how many counters in each containers?

Encourage children to use systematic sharing strategy and encourage the learners not to count by ones.

Use the same activity but increase the number range

1.3 Combining and counting equal groups

Place out ten 2 – dot cards, put each 2- dot card and let the learner count putting each card after the other. Similar with 3 dots, 4 dots, 5 dots



1.4 Determining the number in an equal share

Resources: Using dots cards/ unifix cubes

Here are 6 counters. Share them amongst three people.

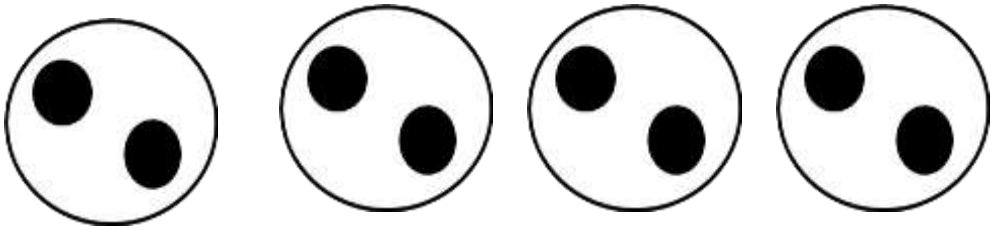
How many will each get? Use 10 and 2, 12 and 6, 18 and 3

1.5 Determining the number of equal groups

Resources: Using dots cards/ unifix cubes

The key focus is developing children's initial ideas, and it is important to observe carefully children's action, language and ways of reasoning. The learners have to realize that each group has the same number of items.

Place out four 2-counter cards:



How many counters are there on each card?

How many cards are there?

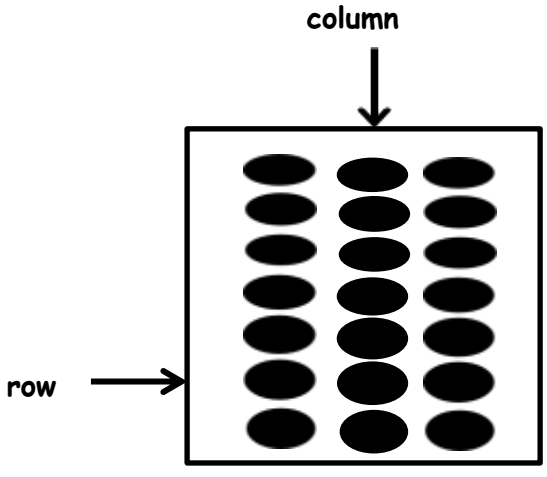
How many counters are there altogether?

1.6 Describing visible arrays

Resources: Arrays

Arrays provide children with a visual image of multiplication, depending on the arrangement of the array. The calculation can be read differently.

Explain the array to the learners - that it has rows and column. Show the learners the rows and columns.



How many rows?

How many dots are altogether?

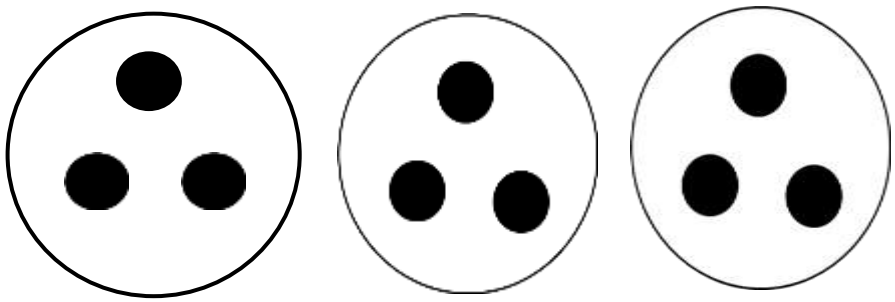
Use the same activity with different arrays

Check what strategies the learners are using. Some learners will count by ones but in multiplication the learners must count in groups. Ensure the learners count in groups

1.7 Developing counting in groups of 3's/ 4's/ 5's using screen items

[15 minutes] Resources: ***2 dots / 4 dots/ 5 dots cards***

- Place out a plate each containing three dots in it. Tell the learners that one plate has three dots, place another plate then and ask the learners how many dots are there altogether in two plates. Put more plates under a screen and ask how many dots are altogether.

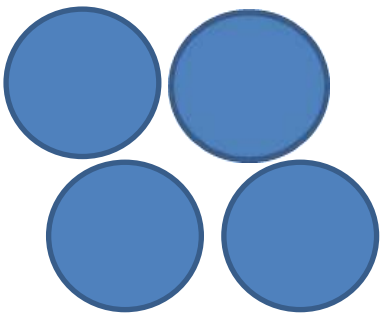


Ensure that the learners don't count in ones

1.8 USE DOT UNDER THE CARD A SCREEN.

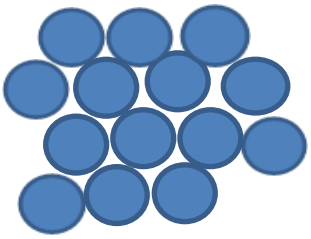
[20 minutes] Resources: dot cards

There are 5 dot cards, under each card there are 4 dots how many dots are there altogether?



Use the same activity but increase the number of dots under each card.

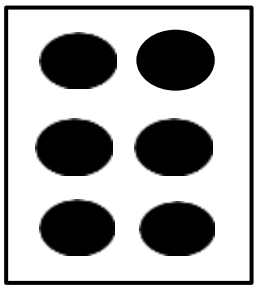
The teacher tells the learner that there are 7 cards with 14 dots altogether. Ask how many dots in each card? Learners will not be allowed to touch the dots.



Use the same activity but increase the number range on the dot card

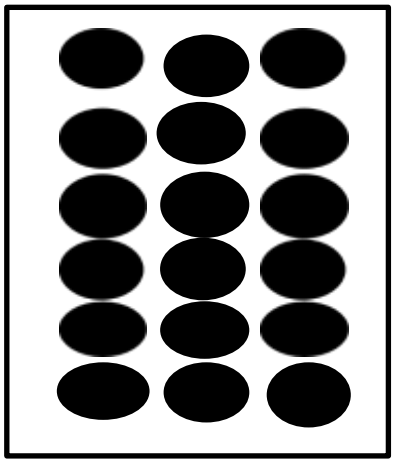
1.9 Resources: Arrays

- Display the first row for a second while other rows are covered. Let the learners look at the first row and then show the others for another second or two, ask learners as to how many dots are altogether.



Use the same activity with different arrays

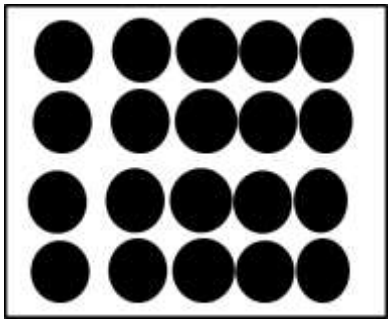
- The teacher unscreened the first row and screens the rest and tells the learners that there are 6 rows altogether, how many dots are there altogether.



Use the same activity with different arrays

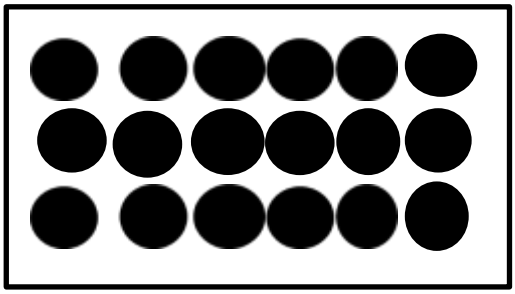
Place a 4 x 5 array and cover one row,

- How many dots are altogether?



- How many rows are there?
- How many columns?

The teacher turns the array at 90°



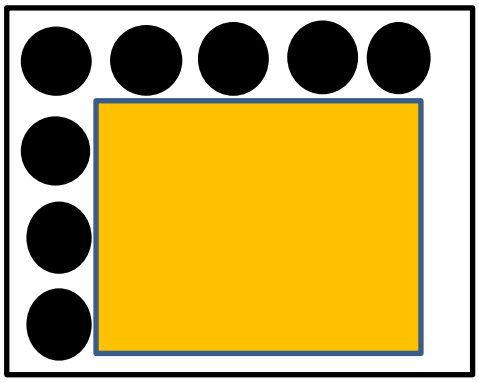
- How many dots are altogether?
- How many rows are there?
- How many columns?

Use the same activity with different arrays

There are 18 dots altogether and there are 3 rows, how many dots in a row.

Use the same activity but increase the number range on the dot cards.

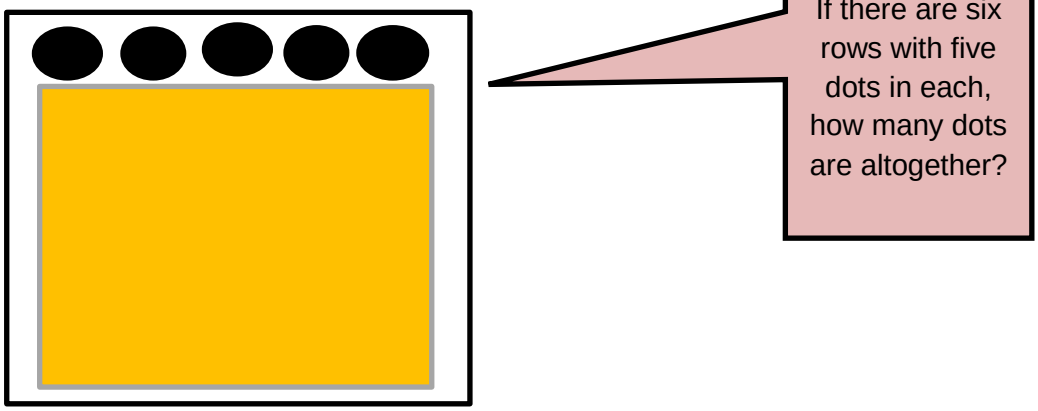
1.10 USE OF A COVERED ARRAY



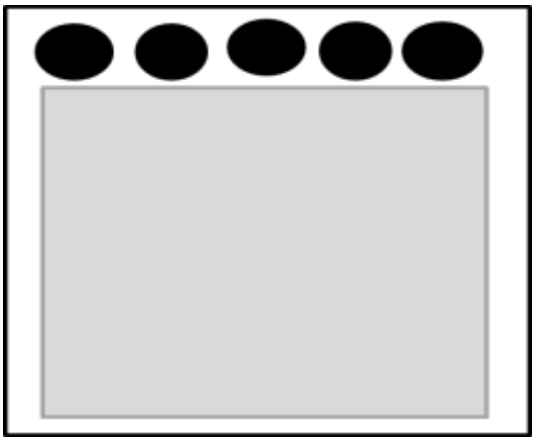
- How many dots are there altogether?
- Explain how did you get the answer?

Use the same activity but increase the number range.

Use the following array to answer the following question



……., **because**…….



There are 15 dots altogether. Each row has five dots. How many rows are there?

…… **because** ……

Word problems: Multiplication and division

Stella sells apples in bags of three apples each. She has 14 apples. How many bags of three apples each can she make up?

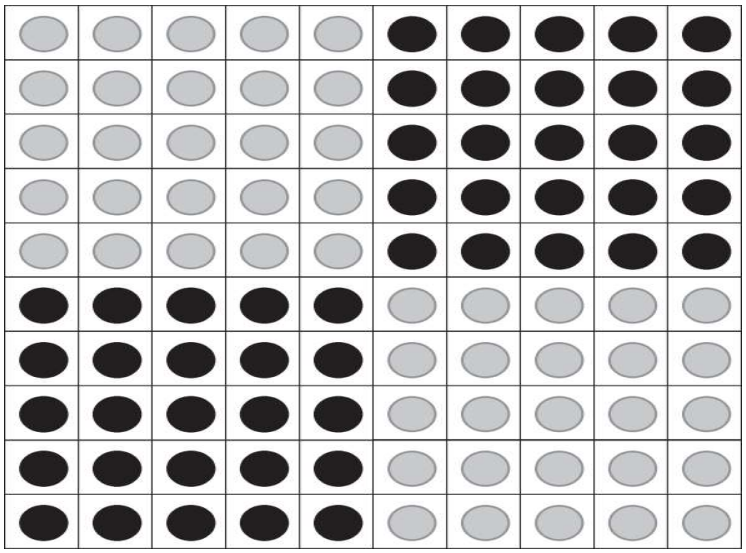
Sixteen balls are put into groups of two's, how many groups of two are there?

The learner count in multiples and keep track of the number of multiples

There are five children and they each have four chocolate pieces. How many chocolate pieces are there altogether?

Multiplication Facts

Use an array in assisting the learning of multiplication facts 10 x 10 dot array



Learners are asked to come to show what 5 x 6 look like and are showed 5 x 6 array about turns it to demonstrate 6 x 5

REFERENCE

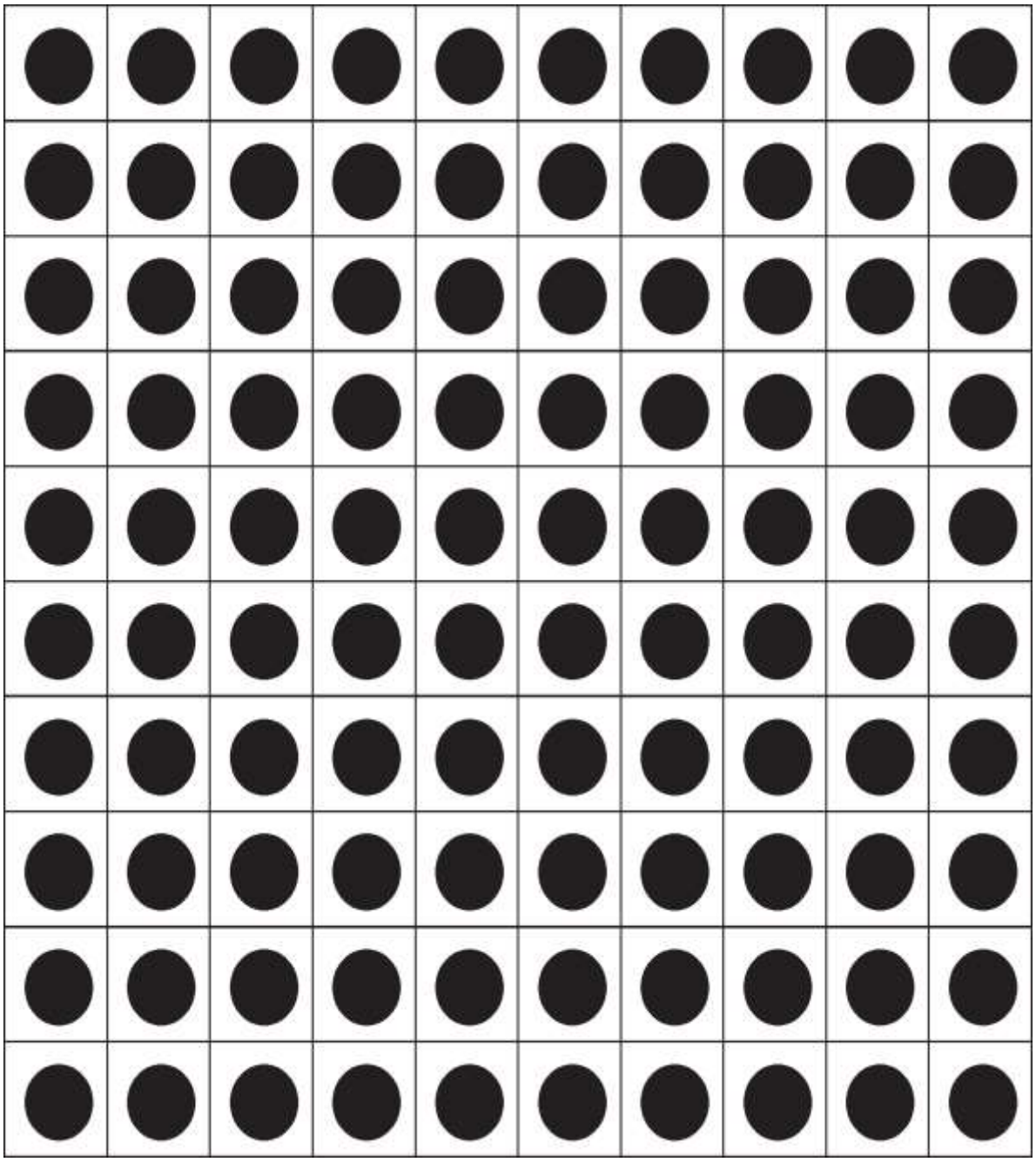
Wright, R. (2003). A Mathematics Recovery: Program of intervention in early number learning. Australian Journal of Learning Disabilities, 8(4).

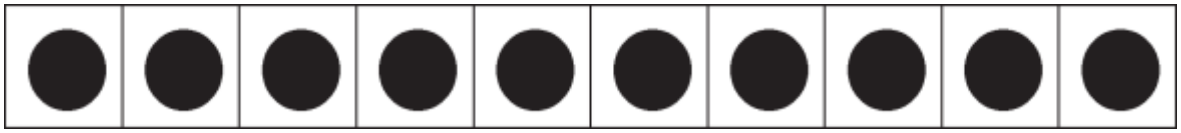
Wright, R. J. (2013). Assessing early numeracy: Significance, trends, nomenclature, contex, key topics, learning framework and assessment tasks. South African Journal of Childhood Education, 3(2), 21 - 40.

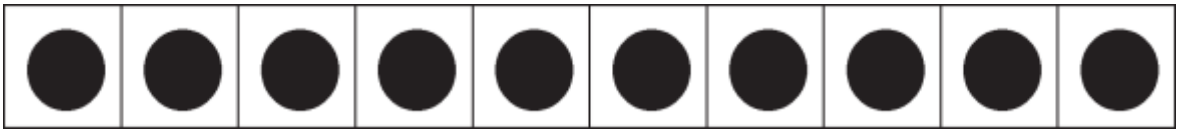
Wright, R.J., Martland, J., & Stafford, A.K. (2006). Early numeracy:assessment for teaching and intervention. London: Paul Chapman Publishing Ltd,.

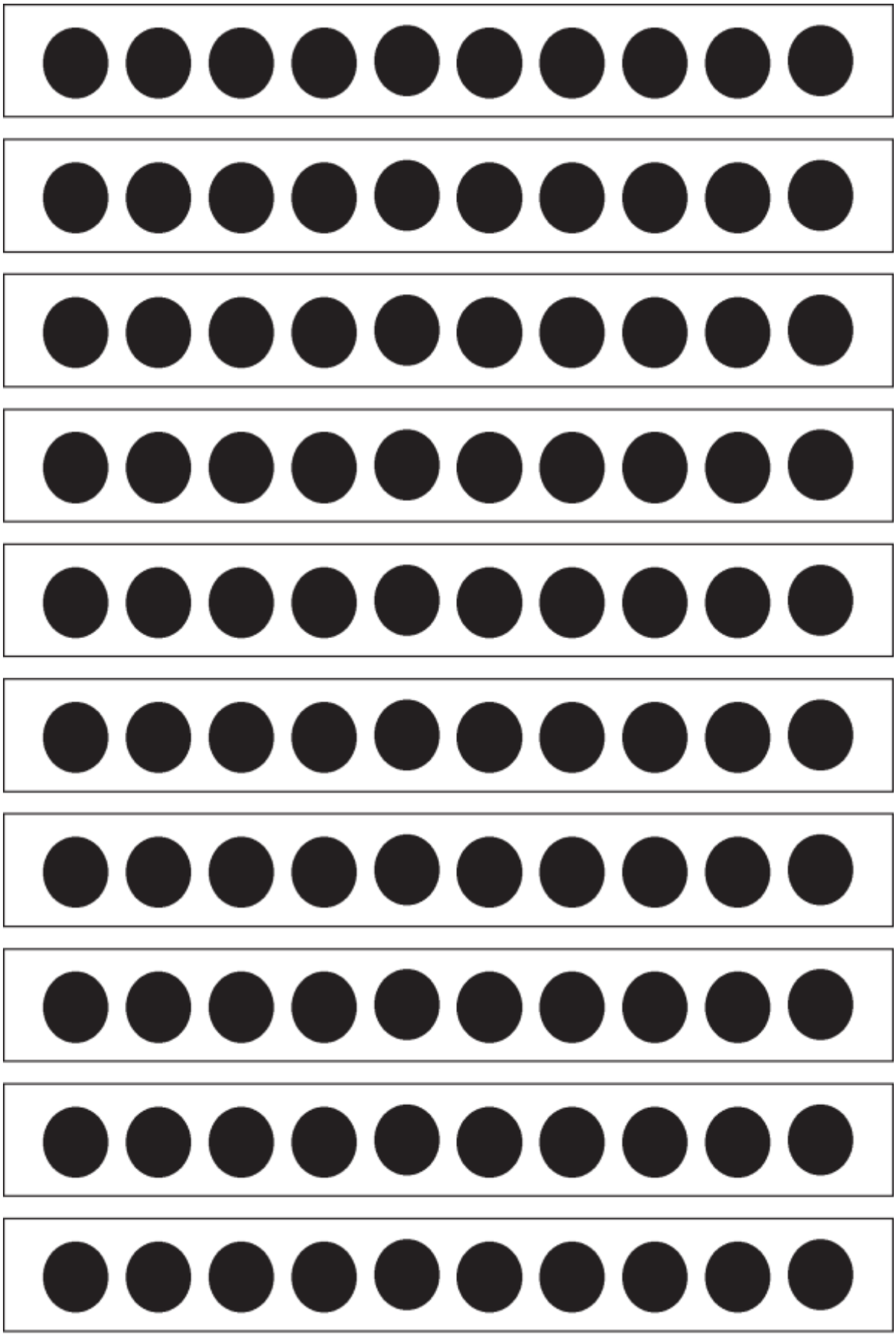
Wright, R.J.. Martland, J., Stafford, A.K. & Stanger, G. (2006). Teaching Number: Advancing children's skills and strategies (2nd edition). London: Paul Chapman Publishing Ltd.

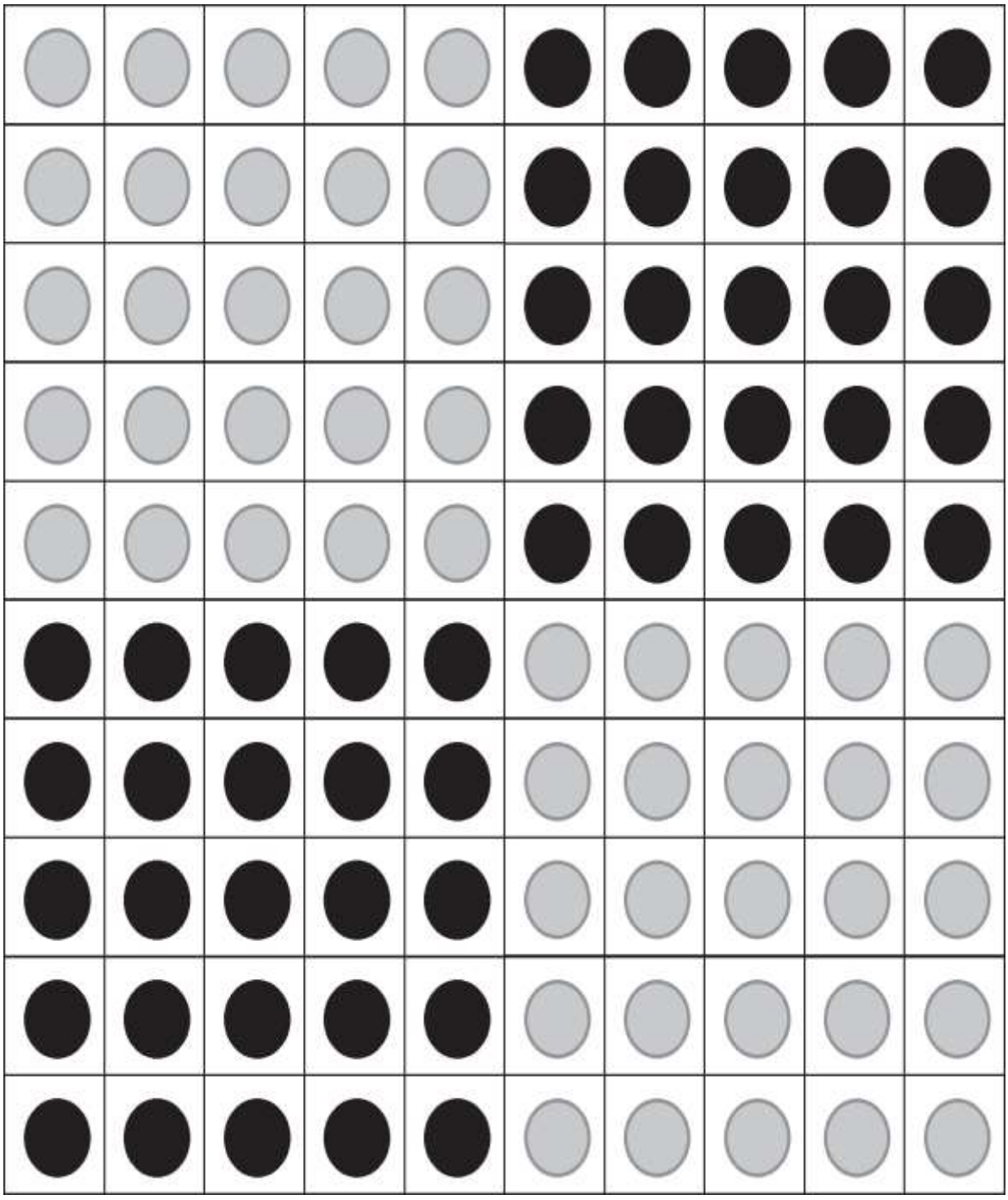
DIFFERENT ARRAYS

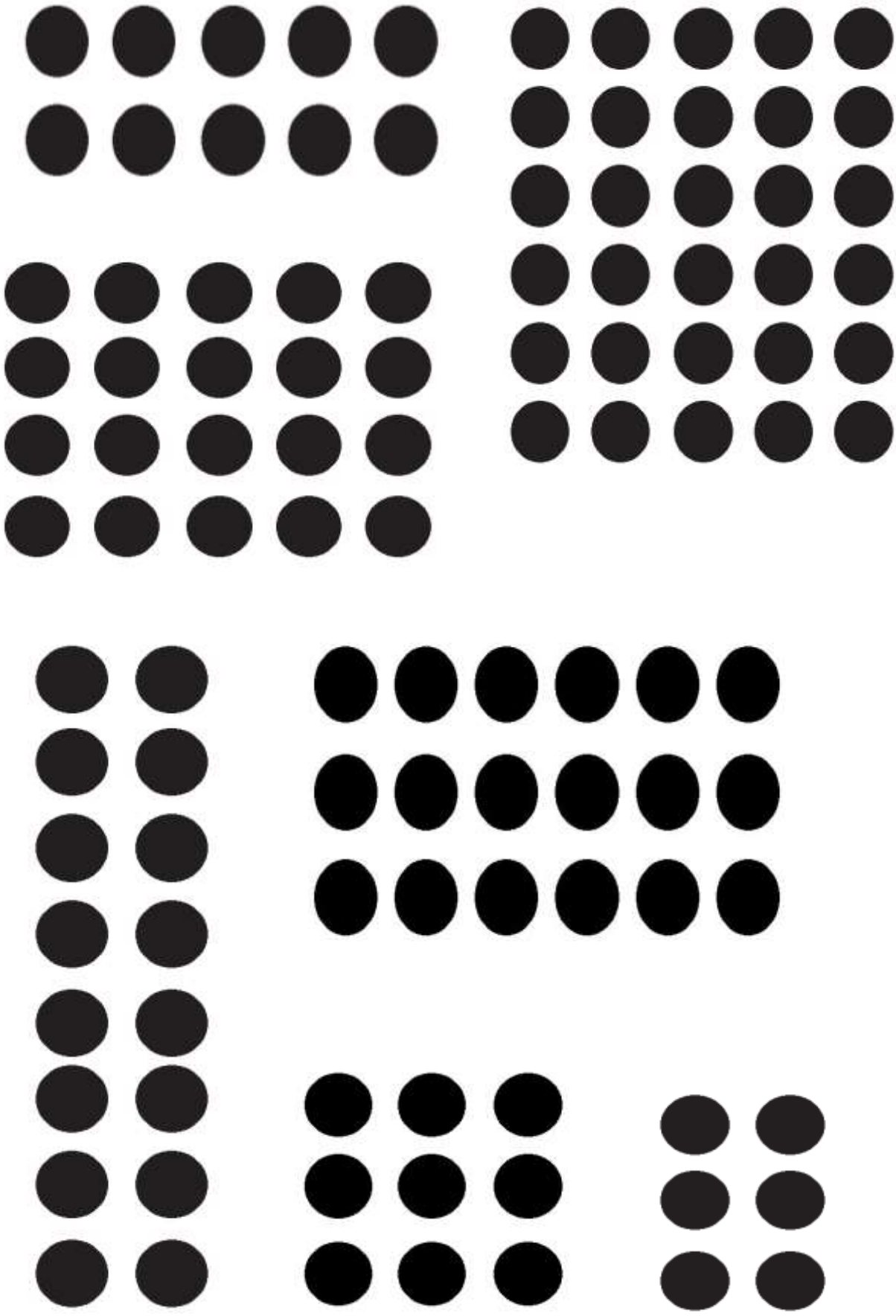


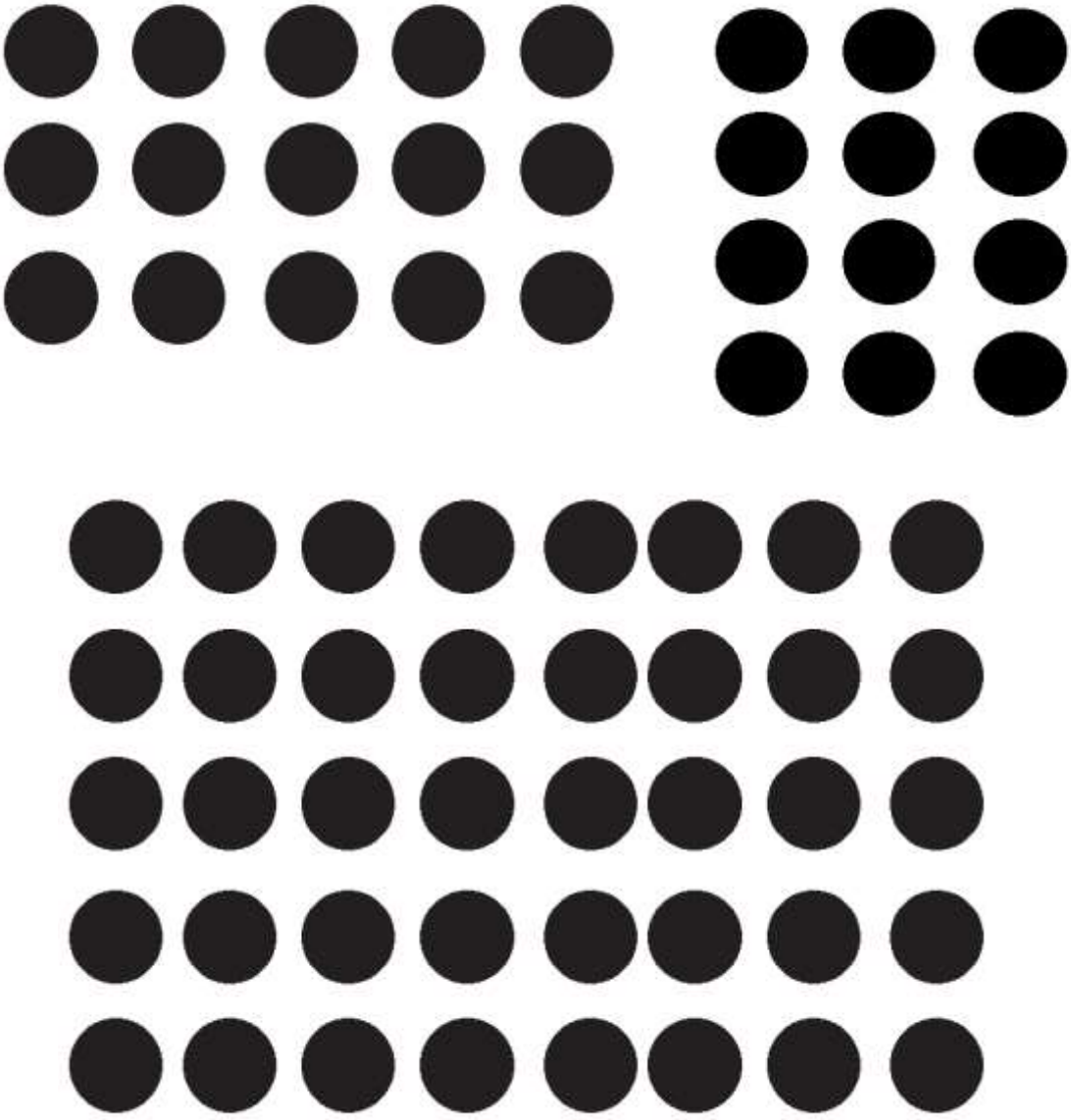
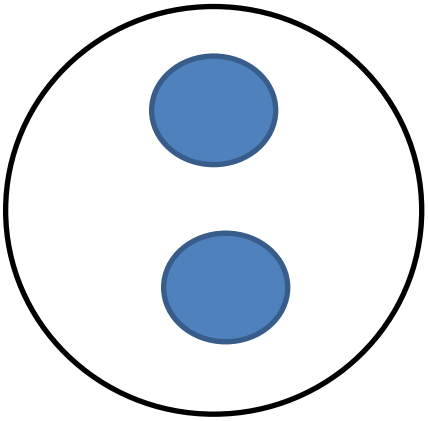
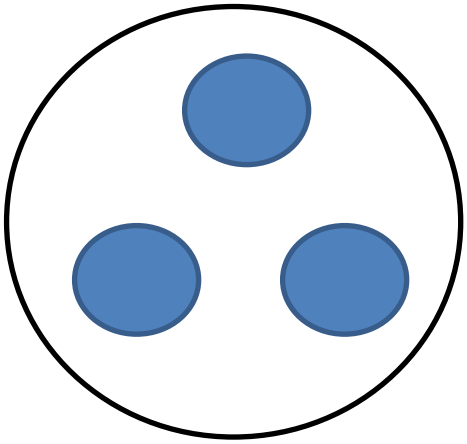
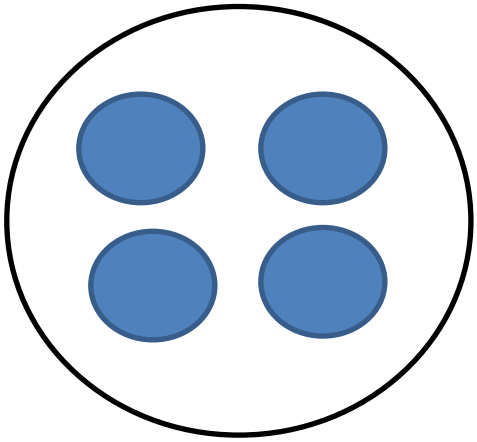
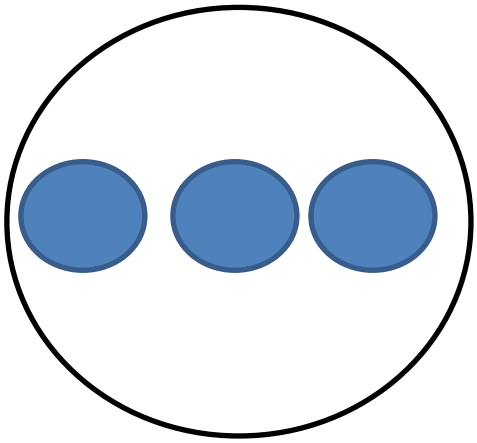
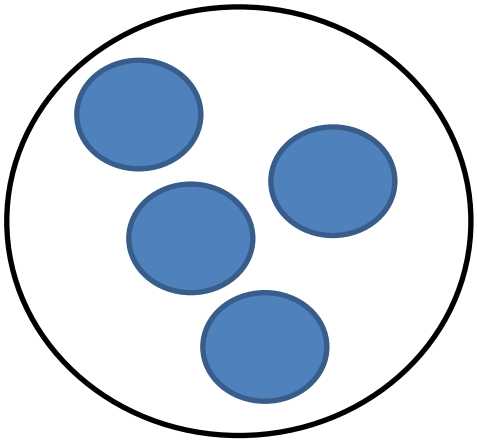
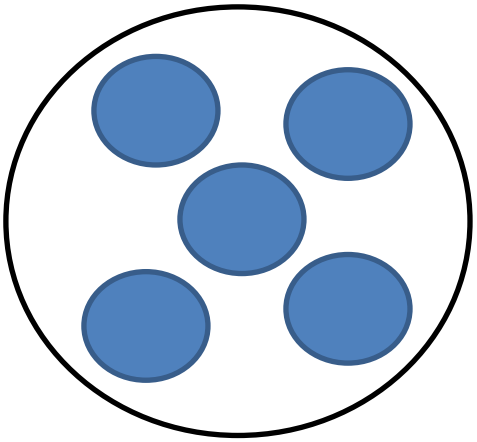
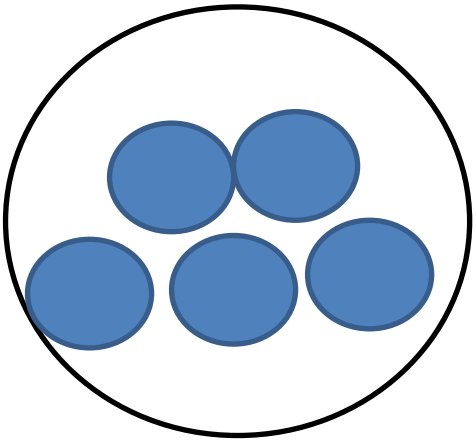












DOT CARDS