

Mathematics Program — Key Stage 1

Section 1: *Number Sense*

Aligning Learning With Key Stage 1

At the end of the section, students will be able to:



- Appreciate that there is a **relationship** between **numbers and quantities**.
- Recognise that **objects** can be arranged in **different groupings** but still have the **same number value**.
- Have lots of opportunities to practice **handling objects** and **talking about sets** before they arrive at the more formal stage of writing numbers down.
- Use small toys, shells, pasta shapes, buttons, counters etc and **talk about groups that contain more or less than each other**.
- **Move the objects around to change the arrangement** and **discuss whether they still contain the same number**, i.e. from a straight line to a random grouping.
- **Practice drawing similar sets of up to 5 objects and recognise their values**. Once this is mastered, they can move up to sets of 10, and so on.

Maths Language:

Students should become increasingly confident in using such terms and phrases as:

The same as..., bigger, biggest, larger, largest, smaller, smallest, more, most, less, least, fewer, fewest, order, first, last, before, after, next, between

Section 1: *Number Sense***Student Exercise:** *(numbers up to 5)***Counting in Rows**

How many houses are in this set?

**Answer:** 3

Which set has more?

Which set has less?

How many houses in this set?

**Answer:** 5**Answer:** B**Answer:** A**Student Exercise:** *(numbers up to 10)***Counting in Rows**


How many dogs are in this set?

**Answer:** 7

Which set has more?

Which set has less?

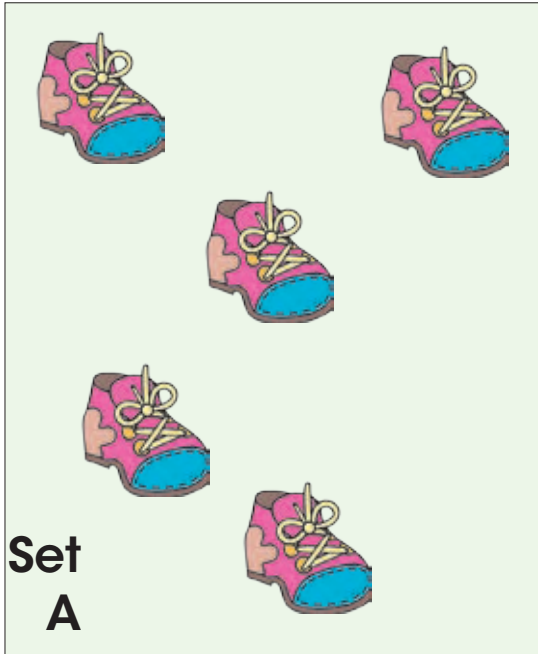
How many dogs are in this set?

**Answer:** 8**Answer:** B**Answer:** A**Teacher Tip** 

Students are asked to recognise the size of a number in a set in relation to another. This will demonstrate an understanding of quantity.

Section 1: *Number Sense***Student Exercise:** (*numbers up to 5*)
Different Arrangements

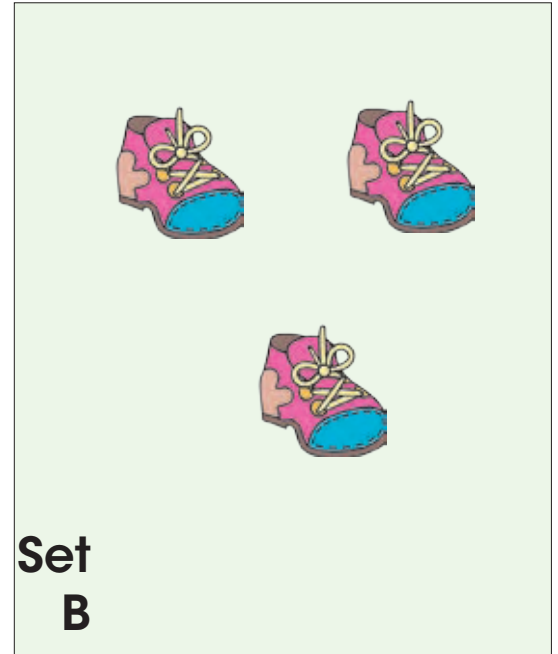

How many shoes are in this set?

**Answer:** 5

Which set has more?

Which set has less?

How many shoes are in this set?

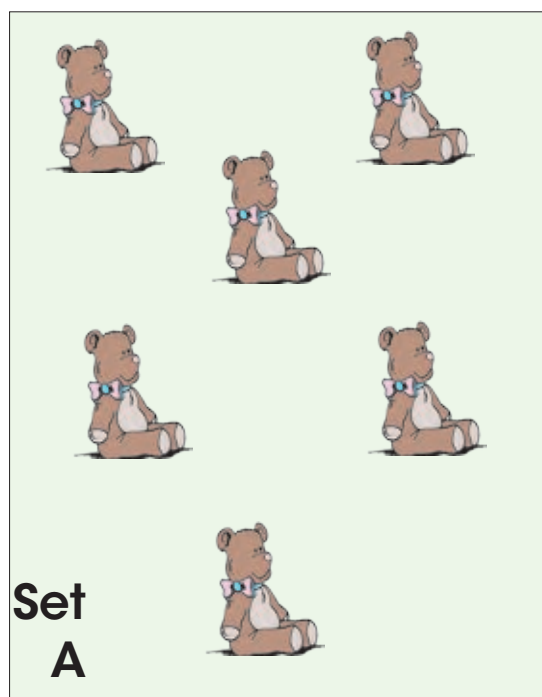
**Answer:** 3 **Answer:** A **Answer:** B **Teacher Tip** 

Students are asked to recognise the number in a set with randomly spaced objects.

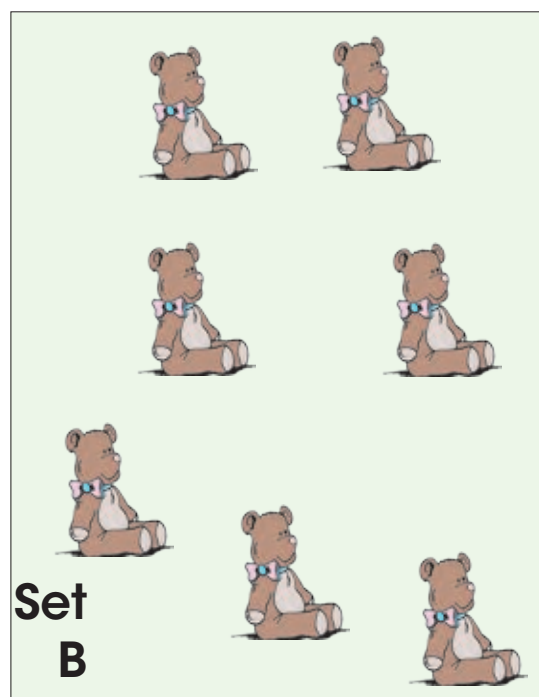
This will demonstrate an understanding that the look of a set may vary.

Section 1: *Number Sense***Student Exercise:** (*numbers up to 10*)
Different Arrangements

How many bears are in this set?



How many bears are in this set?

**Answer:** 6**Answer:** 7

Which set has more?

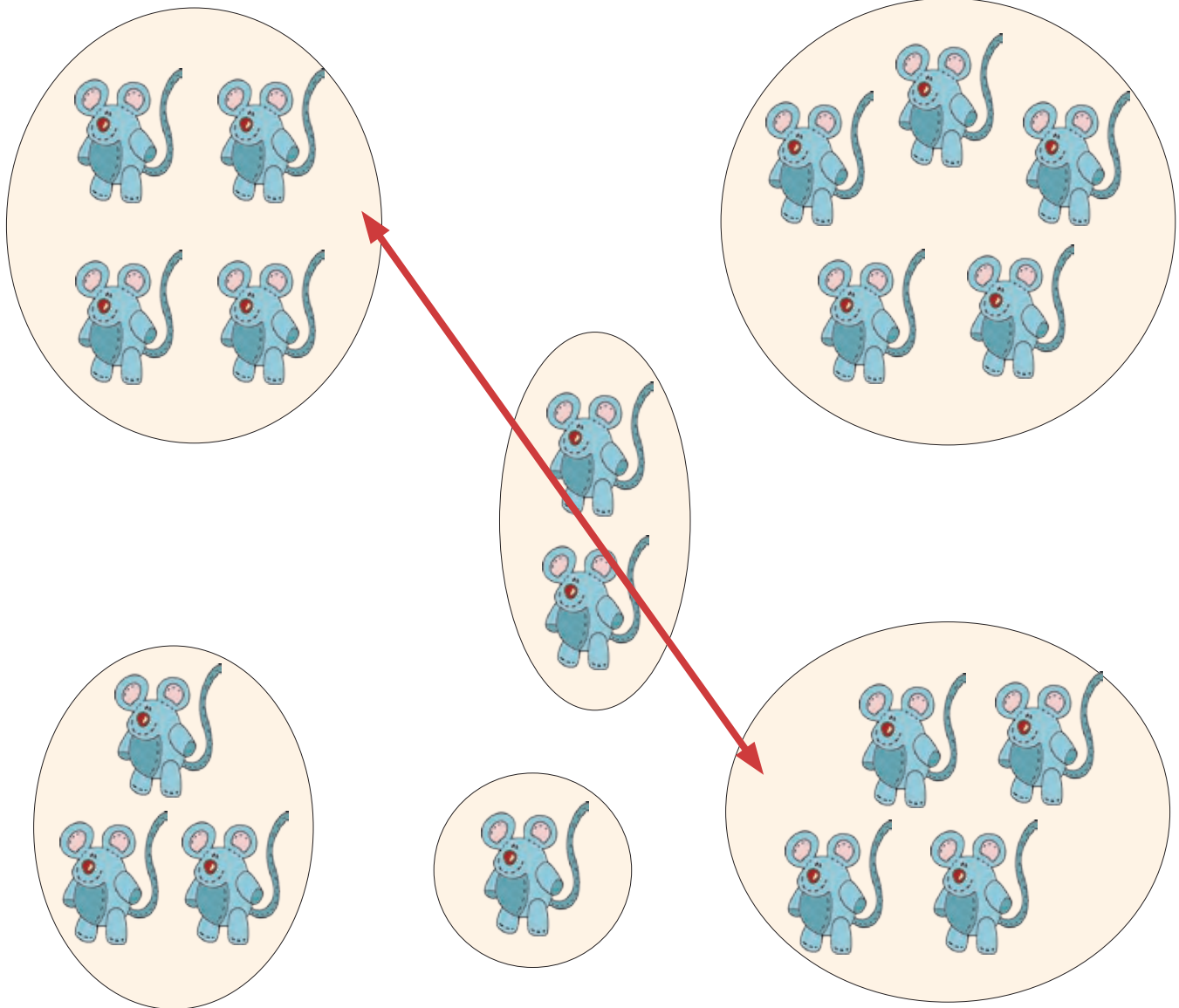

Answer: B

Which set has less?

Answer: A

Section 1: *Number Sense***Student Exercise:** *(numbers up to 5)***Sets that Contain the Same Number of Objects**

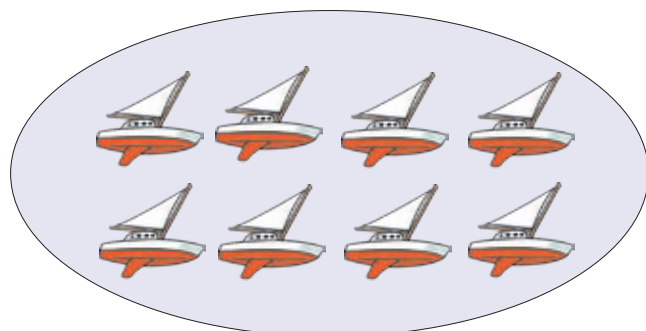
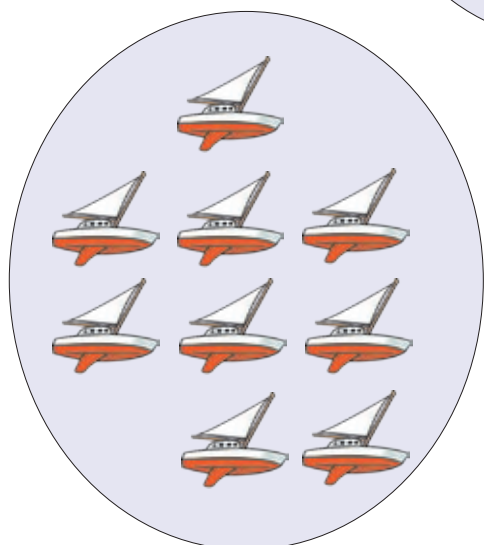
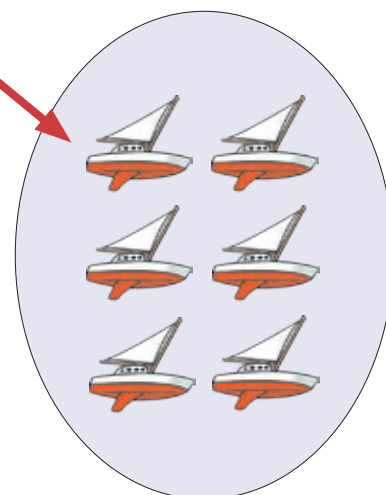
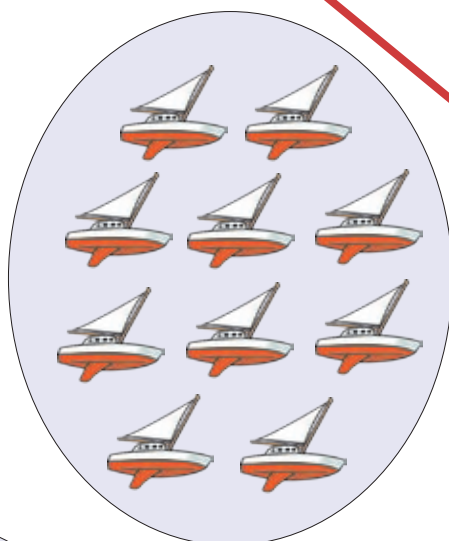
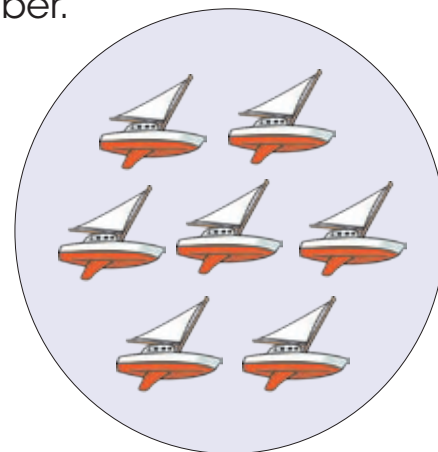
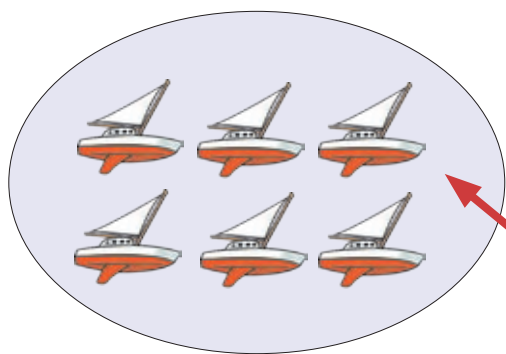
Draw a line to match sets which have the same number.

**Teacher Tip** 

Students are asked to match sets containing the same number to each other, i.e. draw a line to join sets of the same number.

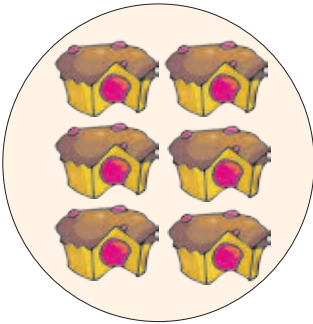
Section 1: *Number Sense***Student Exercise:** (*numbers up to 10*)**Sets that Contain the Same Number of Objects**

Draw a line to match sets which have the same number.

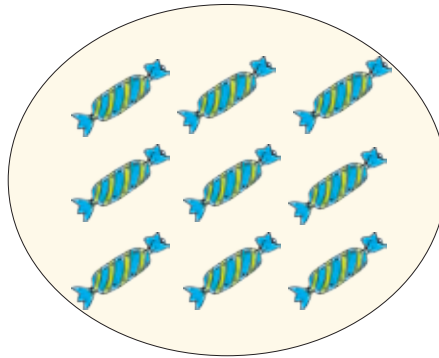


Section 1: *Number Sense***Student Exercise: Sets that Contain Different Numbers of Objects of Different Shape, Size and Colour**Which of the sets contain the **most**?

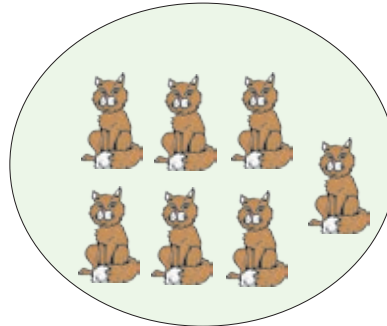
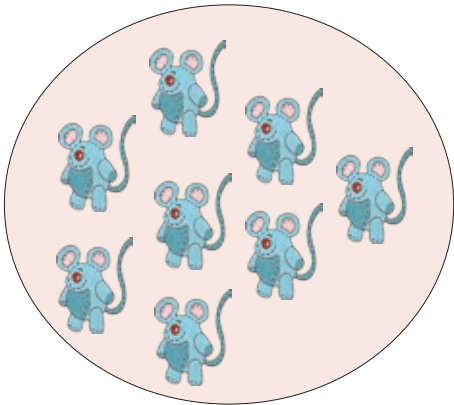
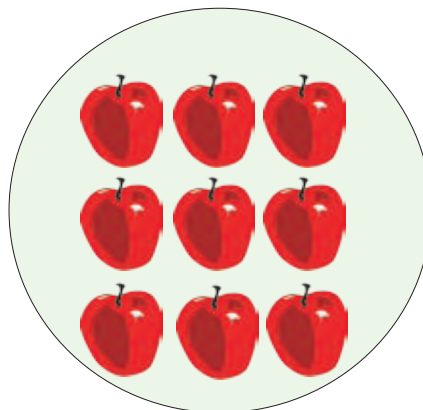
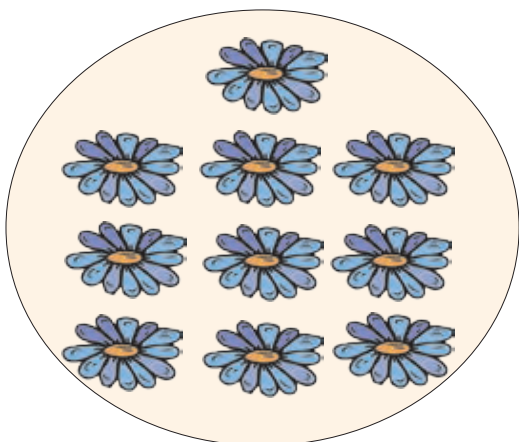
Set A:



Set B:

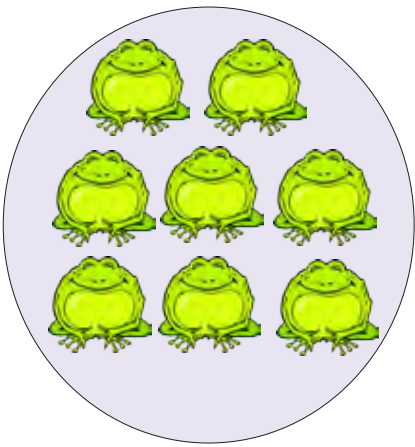


Answer:

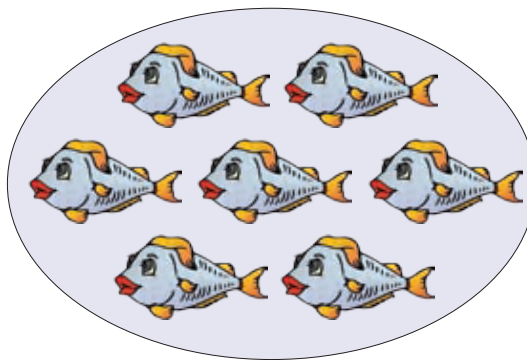
B**A****A**

Section 1: *Number Sense***Student Exercise: Sets that Contain Different Numbers of Objects of Different Shape, Size and Colour**Which of the sets contain the **most**?

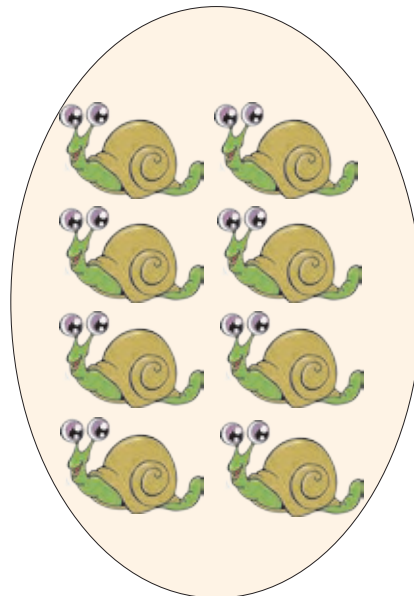
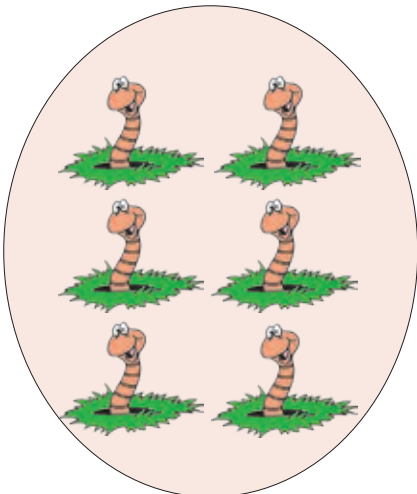
Set A:



Set B:

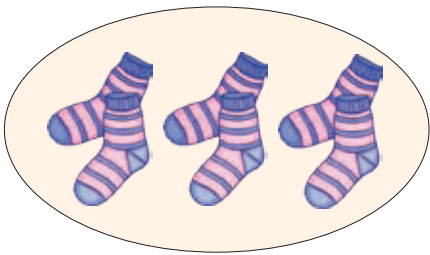


Answer:

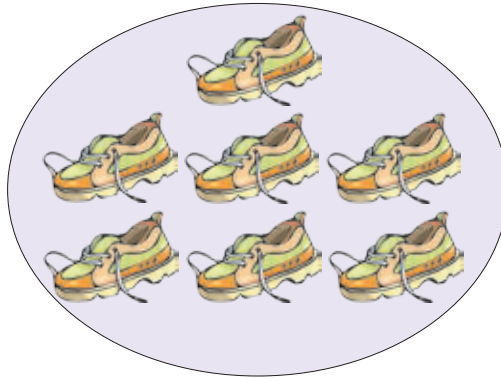
A**B**

Section 1: *Number Sense***Student Exercise: Sets that Contain Different Numbers of Objects of Different Shape, Size and Colour**Which of the sets contain the **least**?

Set A:

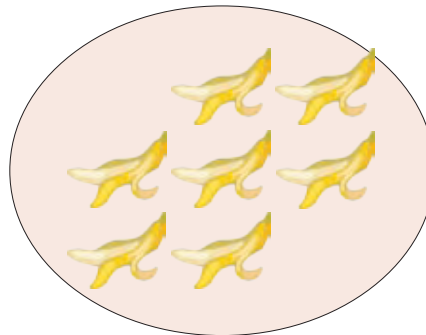
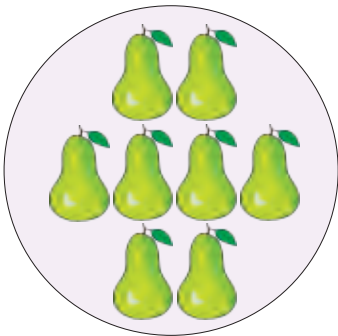


Set B:

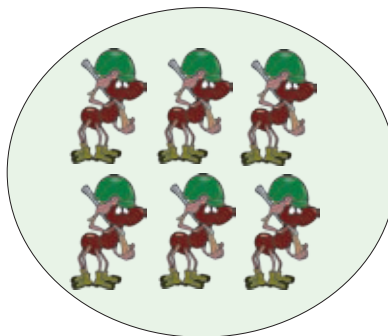
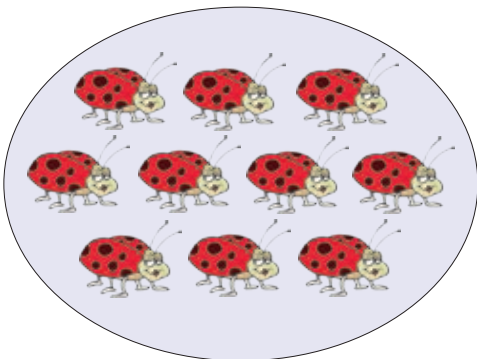


Answer:

A



B

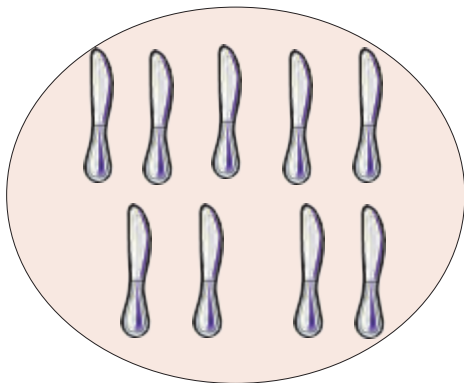


B

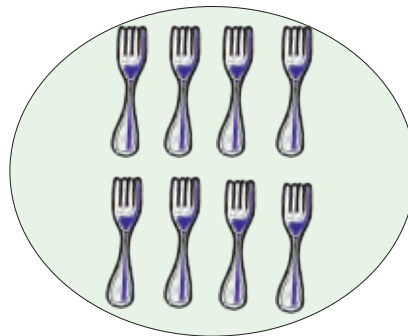
Section 1: *Number Sense***Student Exercise: Sets that Contain Different Numbers of Objects of Different Shape, Size and Colour**

Which of the sets contain the **least**?

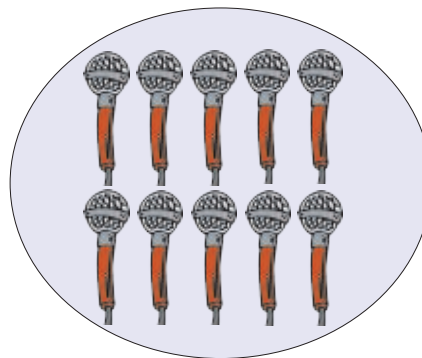

Set A:



Set B:



Answer:

B**A****Teacher Tip** 

This will show that a student can appreciate that shape, size and colour will not affect the quantity.

Section 1: *Number Sense***Developmental Watch:**

- Students may not appreciate that sets of objects may vary in number
- They may be unable to point at an object and then the next and then count on. i.e. one point : one count.
- Sometimes students may say numbers in order but do not associate this with the number of objects that they are counting, even when they are touching the objects or images.
- Sometimes students can count objects that appear in a line but are unable to count accurately when the numbers are in a random arrangement. When this happens their touch and count becomes confused.
- They may sometimes be confused by the size and the shape of different objects.

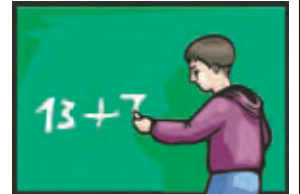
**Teacher Tip**

- Count objects in groups and say one number for each object.
- Use **every opportunity** to place objects in different arrangements to practice counting.
- **Encourage** students to touch each object as they count it.
- It is wise to count from left to right and top to bottom. This establishes a routine starting point and will be helpful later when they are learning to read.
- **Talk with students** when they are counting and encourage them to talk to you. This helps you to understand their thinking.
- **Use the language of maths** at every opportunity and keep referring back to things they have already learned.

Section 1: *Number Sense*

In the Classroom:

- Use opportunities within the classroom to compare numbers and discuss the value of the groupings/sets. The written exercises should only be attempted when a student fully understands the concept and can write the numbers.
- Set up arrangements of objects in groups and discuss their numbers as being different or the same.
- Count things around the classroom:
e.g. compare numbers of books on different tables, up to five and then up to ten.



In the Home:

- Discuss how many candies in one bag and then another bag. Which has more and which has less?
- Unpack groceries and then count them out. Discuss what you discover.
- Put cups and dishes away, counting out loud together.
- The possibilities are endless.

