

Reasoning and Problem Solving

Step 2: Make Equal Groups-Grouping

National Curriculum Objectives:

Mathematics Year 2: (2C6) [Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers](#)

Mathematics Year 2: (2C7) [Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication \(\$\times\$ \), division \(\$\div\$ \) and equals \(=\) signs](#)

Mathematics Year 2: (2C8) [Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts](#)

Mathematics Year 2: (2C9b) [Show that multiplication of two numbers can be done in any order \(commutative\) and division of one number by another cannot](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Explain which numbers can be grouped into equal groups of 2s and 5s (up to 5 groups); numerals only.

Expected Explain which numbers can be grouped into equal groups of 2s, 5s and 10s (up to 12 groups); numerals and words.

Greater Depth Explain which numbers can be grouped into equal groups of 2s, 3s, 5s and or 10s (up to 12 groups).

Questions 2, 5 and 8 (Problem Solving)

Developing Use clues when grouping equally in 2s and 5s (up to 5 groups) to find the missing number; numerals only

Expected Use clues when grouping equally in 2s, 5s and 10s (up to 12 groups) to find the missing number; numerals and words.

Greater Depth Use clues when grouping equally in 2s, 3s, 5s and 10s (up to 12 groups) to find the missing number; numerals and words; introducing remainders.

Questions 3, 6 and 9 (Reasoning)

Developing Explain which statement is correct when grouping equally in 2s and 5s (up to 5 groups); numerals only.

Expected Explain which statement is correct when grouping equally in 2s, 5s and 10s (up to 12 groups); numerals and words.

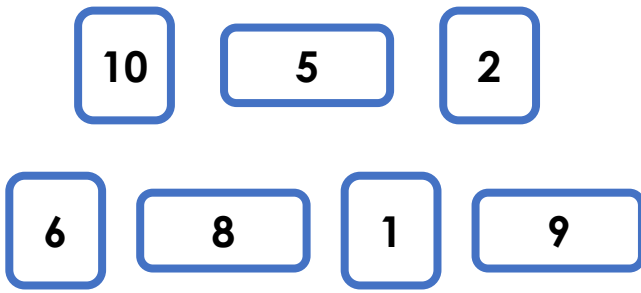
Greater Depth Explain which statement(s) are correct when grouping equally in 2s, 3s, 5s and 10s (up to 12 groups); numerals and words.

[More resources](#) which follow the same small steps as White Rose.

Did you like this resource? Don't forget to [review](#) it on our website.

Make Equal Groups-Grouping

1a. Which of the following numbers can be put into equal groups of 2?



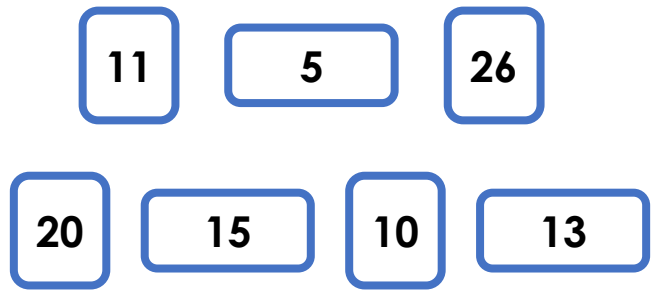
What do you notice about the numbers?



PS

Make Equal Groups-Grouping

1b. Which of the following numbers can be put into equal groups of 5?



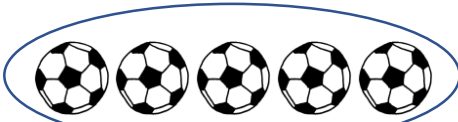
What do you notice about the numbers?



PS

2a. Levi is trying to calculate the number of footballs in a bag.

Levi knows the footballs are put into equal groups of 5. He knows there are 5 groups.



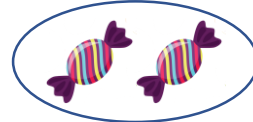
How many footballs were in the bag at the start? Show your working.



PS

2b. Emily is trying to calculate the number of sweets in a packet.

Emily knows sweets are put into equal groups of 2. She knows there are 5 equal groups.



How many sweets were in the packet at the start? Show your working.



PS

3a. Stan and Mia are grouping counters. They each have 15 counters.



Stan

15 in equal groups of 5 equals 4 groups.



Mia

15 in equal groups of 5 equals 3 groups.

Who is correct? Explain why.



R

3b. Troy and Leah are grouping counters. They each have 8 counters.



Isra

8 in equal groups of 2 equals 10 groups.



Ben

8 in equal groups of 2 equals 4 groups.

Who is correct? Explain why.



R

Make Equal Groups-Grouping

Make Equal Groups-Grouping

4a. Which of the following numbers can be put into equal groups of 5?

35

sixty

34

18

twenty

21

fifteen

What do you notice about the numbers?



PS

4b. Which of the following numbers can be put into equal groups of 10?

42

fifty

27

30

sixteen

20

ten

What do you notice about the numbers?



PS

5a. Cleo is trying to calculate the number of colouring pencils in a box.

Cleo knows the pencils are put into equal groups of ten. She knows there are ten equal groups.

How many pencils were in the box at the start? Show your working.



PS

5b. Seth is trying to calculate the number of seeds in a packet.

Seth knows the seeds are planted in equal rows of 5. He knows there are 8 equal rows.

How many seeds were in the packet at the start? Show your working.



PS

6a. Toby, Leo and Kia are grouping counters. They each have 24 counters.



Toby

Twenty four in equal groups of two equals twelve groups.

Twenty four in equal groups of 5 equals 5 groups.



Leo



Kia

Twenty four in equal groups of ten equals two groups.

Who is correct? Explain why.



R

6b. Sam, Beth and Sara are grouping counters. They each have 16 counters.



Sam

Sixteen in equal groups of five equals three groups.

Sixteen in equal groups of two equals eight groups.



Beth



Sara

Sixteen in equal groups of 10 equals 1 group.

Who is correct? Explain why.



R

Make Equal Groups-Grouping

Make Equal Groups-Grouping

7a. Which of the following numbers can be put into equal groups of 3?

21

Thirty
one

12

18

nine

17

fifteen

What do you notice about the numbers?



PS

7b. Which of the following numbers can be put into equal groups of five and ten?

57

fifty
five

60

30

twenty

75

forty

What do you notice about the numbers?



PS

8a. Cain is trying to calculate the number of bananas in a box.

Cain knows the bananas are put into equal groups of five. He knows there are twelve equal groups. Cain says there are three bananas left over.

How many bananas were in the box at the start? Show your working.



PS

8b. Nadia is trying to calculate the number of biscuits in a packet.

Nadia knows the biscuits are put into equal groups of three. He knows there are eleven equal groups. Nadia says there are two biscuits left over.

How many biscuits were in the packet at the start? Show your working.



PS

9a. Ella, Ted and Deeba are grouping counters. They each have 60 counters.



Ella

Sixty in equal groups of ten equals six groups.

Sixty in equal groups of ten equals seven groups.



Ted



Deeba

Sixty in equal groups of five equals twelve groups.

Who is correct? Explain why.



R

9b. Lizzie, Jacob and Max are grouping counters. They each have 20 counters.



Lizzie

Twenty in equal groups of three equals seven groups.

Twenty in equal groups of five equals four groups.



Jacob



Max

Twenty in equal groups of two equals ten groups.

Who is correct? Explain why.



R

Reasoning and Problem Solving Make Equal Groups-Grouping

Developing

- 1a. 2, 6, 8 and 10 can be put in equal groups of 2. They are all multiples of 2.
2a. 25 footballs.
3a. Mia is correct because $15 \div 5 = 3$.

Expected

- 4a. 35, 60, 20 and 15. All the numbers are multiples of 5.
5a. 100 pencils.
6a. Toby is correct because $24 \div 12 = 2$

Greater Depth

- 7a. 21, 12, 18, 9 and 15. All the numbers are multiples of 3.
8a. 63 bananas.
9a. Ella and Deeba are correct because $60 \div 6 = 10$ and $60 \div 12 = 5$.

Reasoning and Problem Solving Make Equal Groups-Grouping

Developing

- 1b. 5, 10, 15 and 20. All the numbers are multiples of 5.
2b. 10 sweets.
3b. Ben is correct because $8 \div 4 = 2$

Expected

- 4b. 50, 30, 20 and 10. All the numbers are multiples of 10. .
5b. 40 seeds.
6b. Beth is correct because $16 \div 8 = 2$

Greater Depth

- 7b. 60, 30, 20 and 40 can be put into equal groups of 5 and 10. All the numbers have zero in the ones column. They are all multiples of ten.
8b. 35 biscuits.
9b. Jacob and Max are correct because $20 \div 4 = 5$ and $20 \div 10 = 2$.