

Reasoning and Problem Solving

Step 1: Recognise Equal Groups

National Curriculum Objectives:

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](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Identify which groups are equal. Groups of up to 5 images, where each image represents 1.

Expected Identify which groups are equal. Groups of up to 10 images, where each image represents 1.

Greater Depth Identify which groups are equal. Groups of images where some images represent more than 1.

Questions 2, 5 and 8 (Reasoning)

Developing Explain the mistake, using knowledge of recognising equal groups. Groups of up to 5 images, where each image represents 1.

Expected Explain the mistake, using knowledge of recognising equal groups. Groups of up to 10 images, where each image represents 1.

Greater Depth Explain the mistake, using knowledge of recognising equal groups. Groups of images where some images represent more than 1.

Questions 3, 6 and 9 (Problem Solving)

Developing Identify which group is not equal to the others. Groups of up to 5 images, where each image represents 1 value.

Expected Identify which group is not equal to the others. Groups of up to 10 images, where each image represents 1 value.

Greater Depth Identify which group is not equal to the others. Groups of images where multiple images represent the same value.

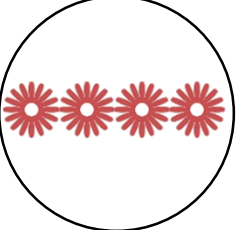
More [Year 2 Multiplication and Division](#) resources.

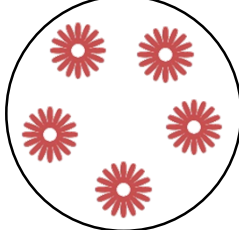
Did you like this resource? Don't forget to [review](#) it on our website.

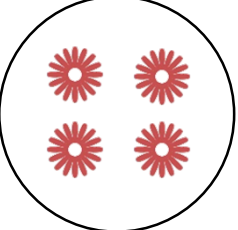
Recognise Equal Groups

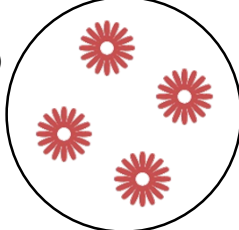
Recognise Equal Groups

1a. Which groups are equal? Explain your reasoning.


A


B


C


D

1b. Which groups are equal? Explain your reasoning.


A

B


C

D


2a. Olivia says,




I have grouped my teddies into 2 equal groups of 3.



2b. Cassius says,



I have grouped my fish into 3 equal groups of 2.





What mistake has she made? Explain your answer.


What mistake has he made? Explain your answer.

3a. Justin is counting his pocket money.

He is making equal groups that each have the same amount of money.


A


B


C

3b. Nadia is counting her pocket money.

She is making equal groups that each have the same amount of money.

A

B

C

Which group is not equal to the others?

Which group is not equal to the others?



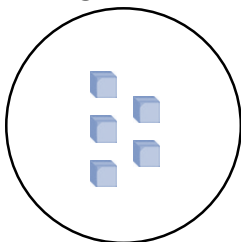
Recognise Equal Groups

Recognise Equal Groups

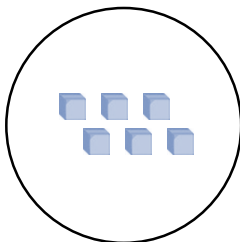
4a. Which groups are equal? Explain your reasoning.

4b. Which groups are equal? Explain your reasoning.

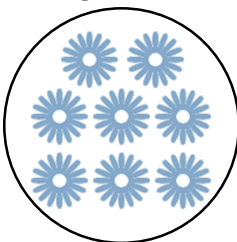
A



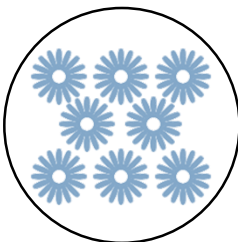
B



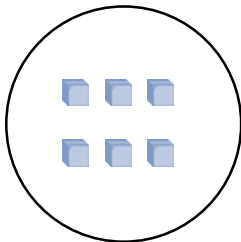
A



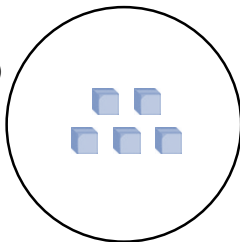
B



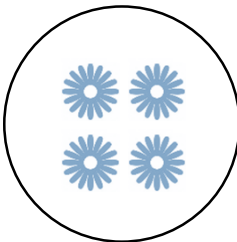
C



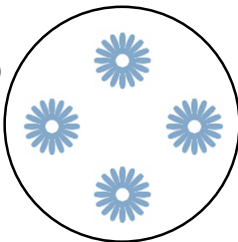
D



C



D



R



R

5a. Jack says,

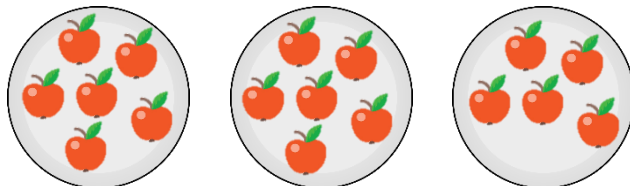
5b. Sophie says,



I have grouped my sweets into 4 equal groups of 7.



I have grouped my apples into 3 equal groups of 6.



What mistake has he made? Explain your answer.

What mistake has she made? Explain your answer.



R



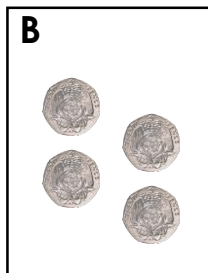
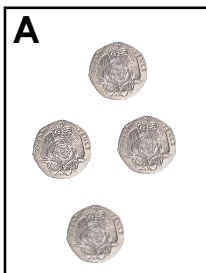
R

6a. Milo is counting his pocket money.

6b. Leah is counting her pocket money.

He is making equal groups that each have the same amount of money.

She is making equal groups that each have the same amount of money.



Which group is not equal to the others?

Which group is not equal to the others?



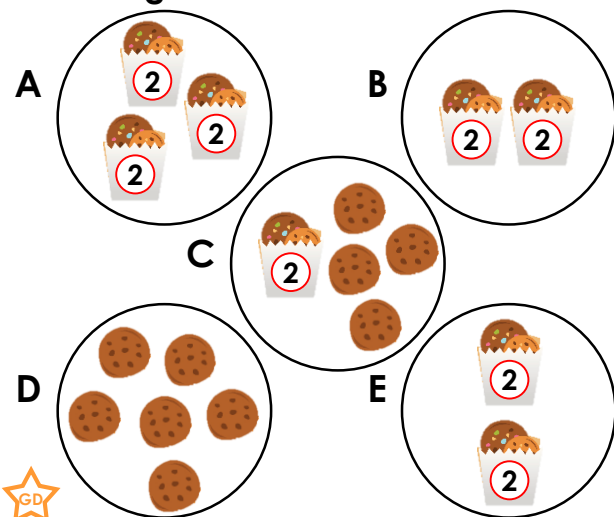
PS



PS

Recognise Equal Groups

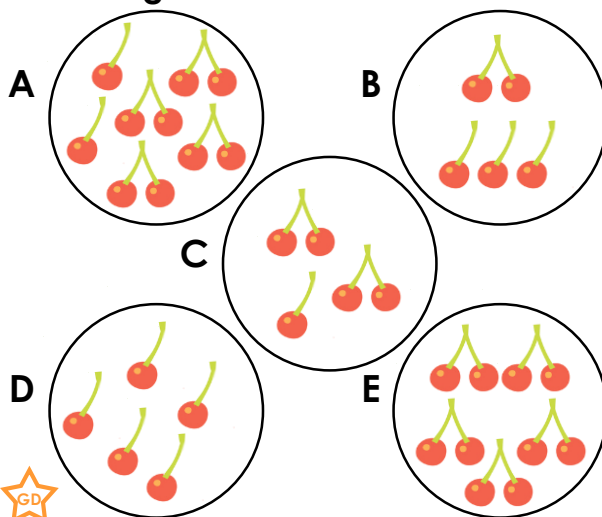
7a. Which groups are equal? Explain your reasoning.



R

Recognise Equal Groups

7b. Which groups are equal? Explain your reasoning.



R

8a. Aleema says,



I have grouped my bananas into 3 equal groups of 7.



What mistake has she made? Explain your answer.



R

8b. Mckenzie says,



I have grouped my biscuits into 2 equal groups of 6.



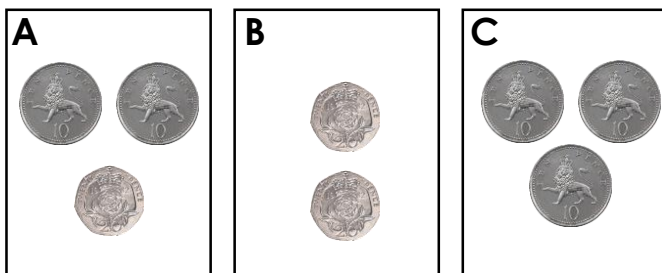
What mistake has he made? Explain your answer.



R

9a. Sandy is counting her pocket money.

She is making equal groups that each have the same amount of money.



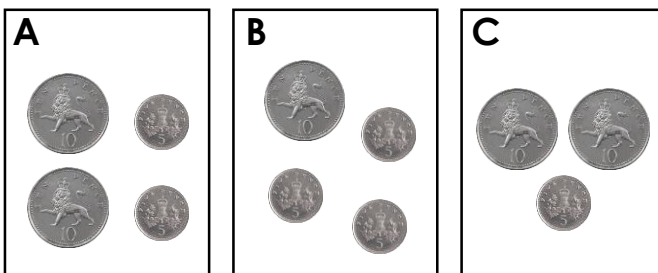
Which group is not equal to the others?



PS

9b. Danny is counting his pocket money.

He is making equal groups that each have the same amount of money.



Which group is not equal to the others?



PS

Reasoning and Problem Solving

Recognise Equal Groups

Developing

- 1a. A, C and D are equal as they each have a group of 4. B has a group of 5.
- 2a. Olivia has put 3 teddies in the first box and 2 teddies in the second box. They are not equal groups.
- 3a. C has 3p and is not equal to A and B, which each have 4p.

Expected

- 4a. A and D are equal as they each have groups of 5. C and B are equal as they each have groups of 6.
- 5a. Jack has put 7 sweets in the first, third and fourth jar and 6 sweets in the second jar. They are not equal groups.
- 6a. A has 50p and is not equal to B and C, which each have 60p.

Greater Depth

- 7a. A, C and D are equal as they each have groups of 6. B and E are equal as they each have groups of 4.
- 8a. Aleema has put 7 bananas in the first and second crate and 6 bananas in the third crate. They are not equal groups.
- 9a. C has 30p and is not equal to A and B, which each have 40p.

Reasoning and Problem Solving

Recognise Equal Groups

Developing

- 1b. B, C and D are equal as they each have a group of 5. A has a group of 4.
- 2b. Cassius has put 3 fish in the first bowl and 2 fish in the second and third bowls. They are not equal groups.
- 3b. B has 20p and is not equal to A and C, which each have 25p.

Expected

- 4b. A and B are equal as they each have groups of 8. C and D are equal as they each have groups of 4.
- 5b. Sophie has put 6 sweets on the first and second plate and 5 apples on the third plate. They are not equal groups.
- 6b. C has 60p and is not equal to A and B, which each have 80p.

Greater Depth

- 7b. A and E are equal as they each have groups of 10. B, C and D are equal as they each have groups of 5.
- 8b. McKenzie has put 8 biscuits on the first tray and 6 biscuits on the second tray. They are not equal groups.
- 9b. A has 30p and is not equal to B and C, which each have 25p.