Reasoning and Problem Solving
Step 1: Make Equal Parts

National Curriculum Objectives:

Mathematics Year 2: (2F1a) Recognise, find, name and write fractions 1/3 , 1/4 , 2/4 and 3/4 of a length, shape, set of objects or quantity

Differentiation:

Questions 1, 4 and 7 (Reasoning)
Developing Explain whether a statement is correct when dividing objects into equal and unequal groups. Includes dividing objects arranged in an array into 2 equal groups.
Expected Explain whether a statement is correct when dividing objects into equal and unequal groups. Includes dividing objects arranged in arrays and at random, into up to 4 equal or unequal groups.
Greater Depth Explain whether a statement is correct when dividing objects into equal and unequal groups. Includes dividing objects arranged in arrays and at random, into up to 4 equal or unequal groups.

Questions 2, 5 and 8 (Problem Solving)
Developing Divide the shapes into the correct number of equal or unequal parts, using squares and circles.
Expected Divide the shapes into the correct number of equal or unequal parts, using squares, rectangles and circles.
Greater Depth Divide the shapes into the correct number of equal or unequal parts, using various shapes.

Questions 3, 6 and 9 (Reasoning)
Developing Explain whether groups of shapes have been divided into equal groups. Shapes are divided into two parts only and are arranged in order
Expected Explain whether groups of shapes have been divided into equal groups. Shapes have been divided into three parts. Some shapes are arranged randomly.
Greater Depth Explain whether group of shapes have been divided into equal groups. Shapes have been divided into three or four groups. Shapes are arranged randomly.

More Year 2 Fractions resources.

Did you like this resource? Don't forget to review it on our website.

Make Equal Parts

1a. Jack thinks that if he divides the stars into 2 equal groups, there will be 8 in each group.

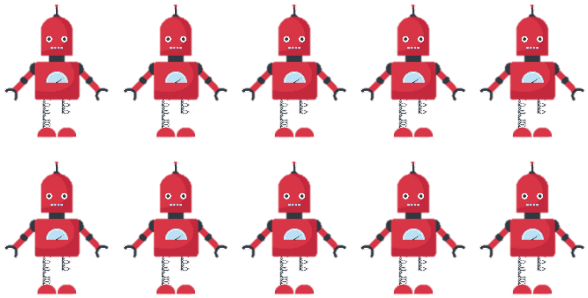
Is Jack correct? Explain why.

D

R

Make Equal Parts

1b. Sasha thinks that if she divides the robots into 2 equal groups, there will be 5 in each group.

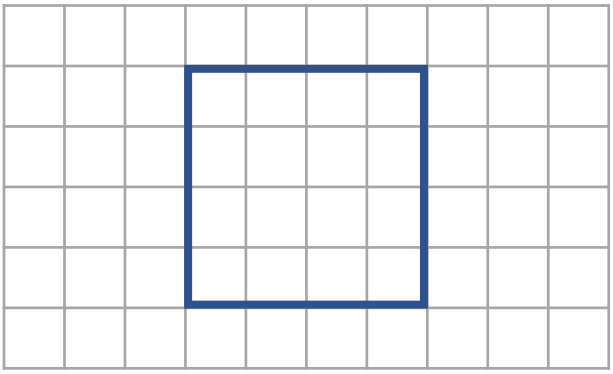


Is Sasha correct? Explain why.

D

R

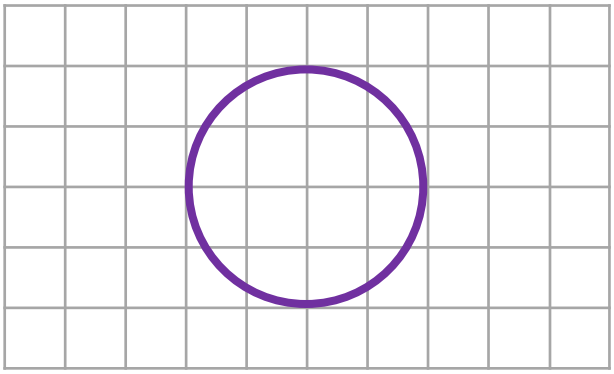
2a. Divide the shape below into 2 equal parts.



D

PS

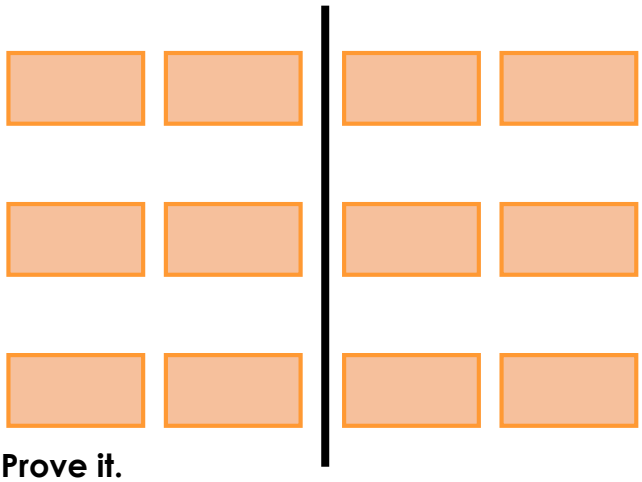
2b. Divide the shape below into 2 unequal parts.



D

PS

3a. True or false? Both groups are equal.

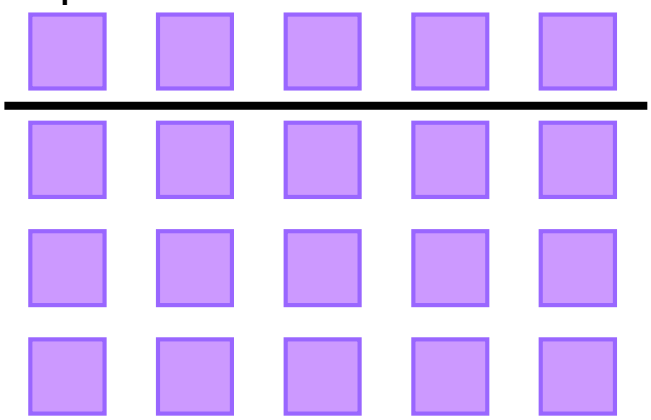


Prove it.

D

R

3b. True or false? Both groups are unequal.



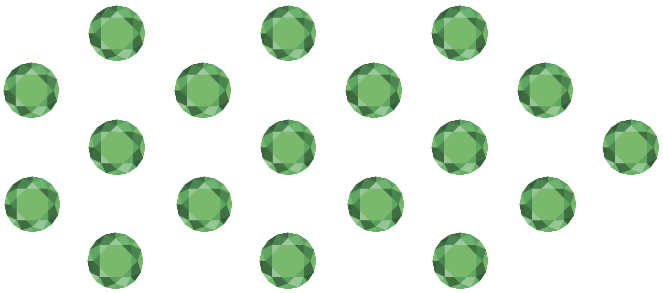
Prove it.

D

R

Make Equal Parts

4a. Daisy thinks that if she divides the jewels into 3 equal groups, there will be 7 in each group.

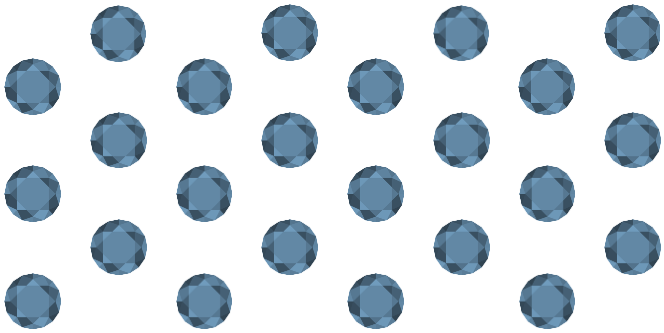


Is Daisy correct? Explain why.

E R

Make Equal Parts

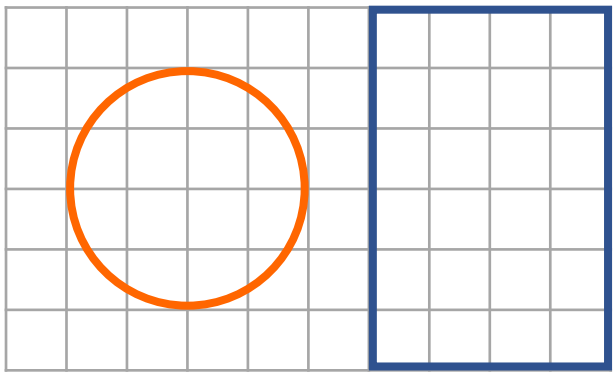
4b. Mo thinks that if he divides the jewels into 4 equal groups, there will be 6 in each group.



Is Mo correct? Explain why.

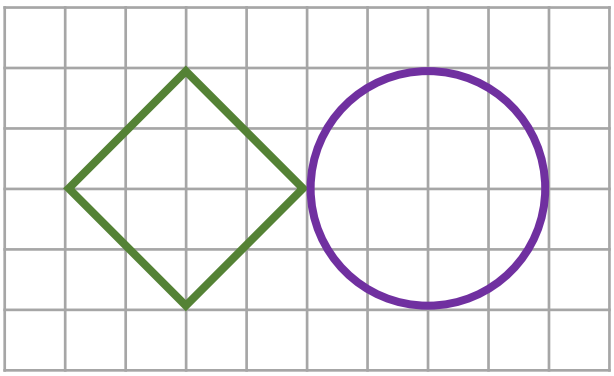
E R

5a. Divide the shapes below into 4 unequal parts.



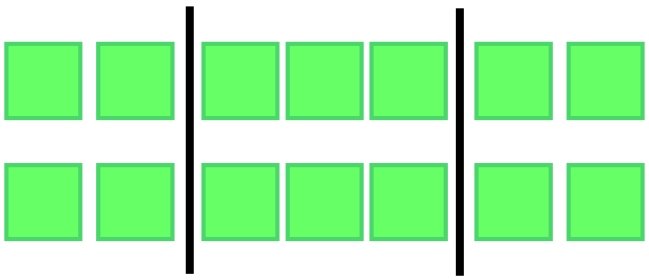
E PS

5b. Divide the shapes below into 4 equal parts.



E PS

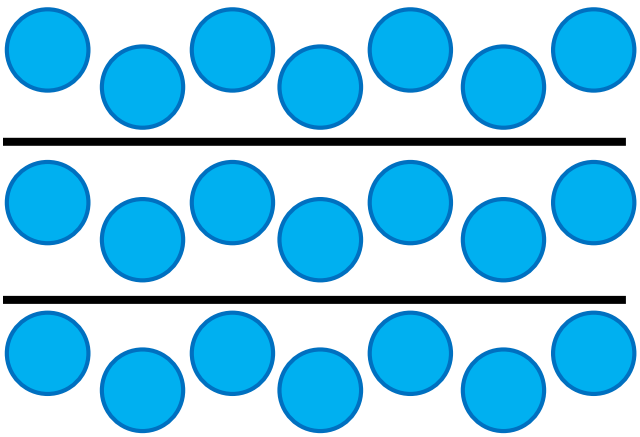
6a. True or false? All the groups are equal.



Prove it.

E R

6b. True or false? All the groups are equal.

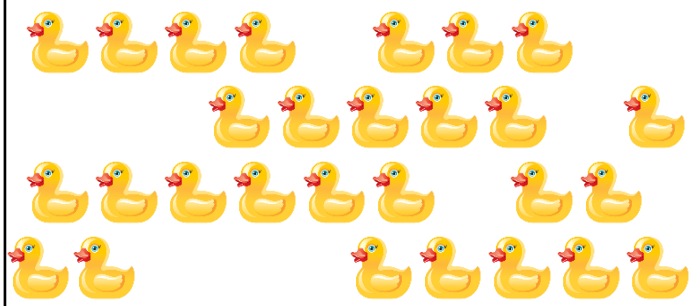


Prove it.

E R

Make Equal Parts

7a. Omar thinks that if he divides the ducks into 4 equal groups, there will be 6 in each group.



Is Omar correct? Explain why.

GD R

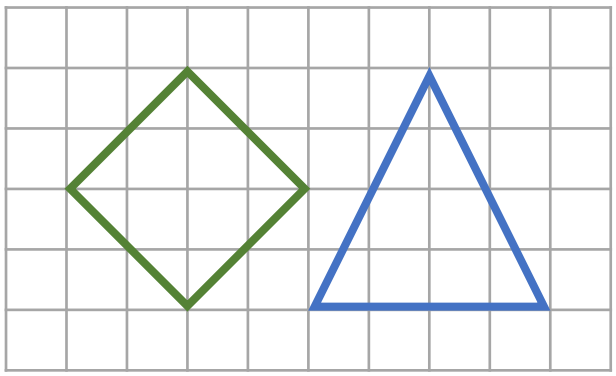
Make Equal Parts

7b. Jill thinks that if she divides the basketballs into 4 equal groups, there will be 4 in each group.

Is Jill correct? Explain why.

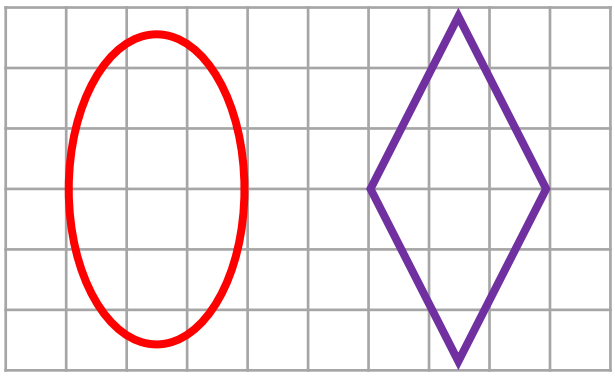
GD R

8a. Divide the shapes below into 3 unequal parts.



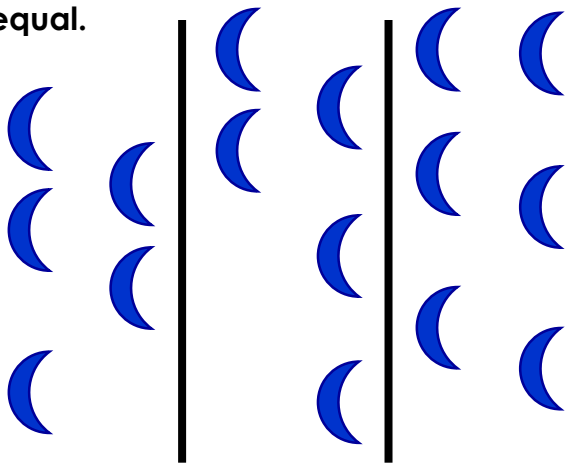
GD PS

8b. Divide the shapes below into 4 equal parts.



GD PS

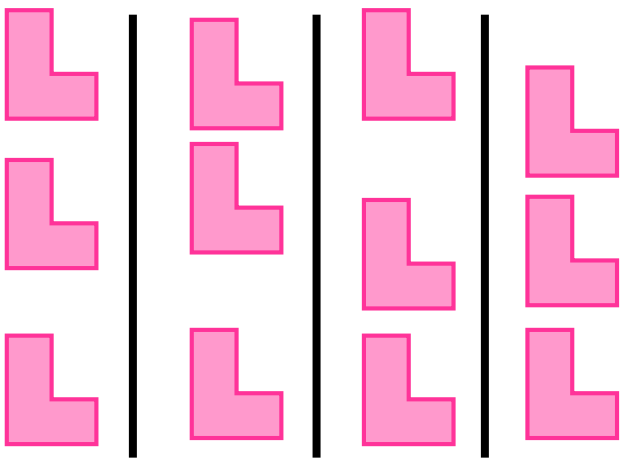
9a. True or false? All the groups are unequal.



Prove it.

GD R

9b. True or false? All the groups are equal.



Prove it.

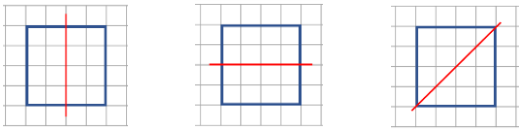
GD R

Reasoning and Problem Solving
Make Equal Parts

Developing

1a. Jack is incorrect because 12 ÷ 2 = 6 so there will be 6 stars in each equal group.

2a. Various answers, for example:

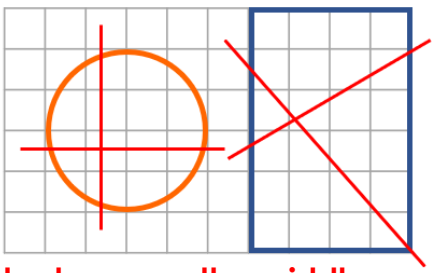


3a. True because there are 6 rectangles in each equal group.

Expected

4a. Daisy is incorrect because 18 ÷ 3 = 6 so there will be 6 jewels in each equal group.

5a. Various answers, for example:

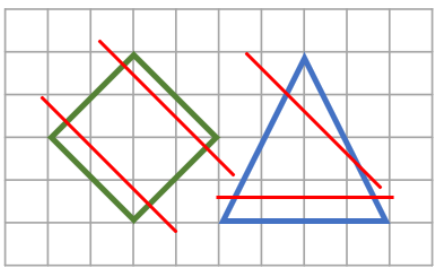


6a. False because the middle group has 6 squares and the other two groups have 4 squares each.

Greater Depth

7a. Omar is incorrect because 28 ÷ 4 = 7 so there will be 7 ducks in each equal group.

8a. Various answers, for example:



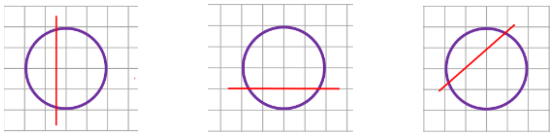
9a. False because two groups are equal with 5 moons in each group. The third group has 6 moons.

Reasoning and Problem Solving
Make Equal Parts

Developing

1b. Sasha is correct because 10 ÷ 2 = 5 so there will be 5 robots in each group.

2b. Various answers, for example:

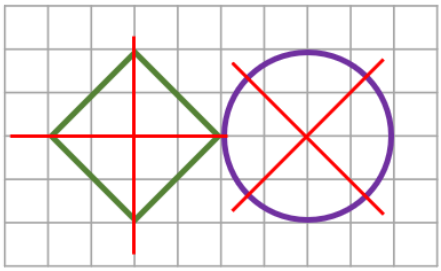


3b. True because unequal parts are not the same and there are 5 squares in one group and 15 squares in the other group.

Expected

4b. Mo is correct because 24 ÷ 4 = 6 so there will be 6 jewels in each group.

5b. Various answers, for example:

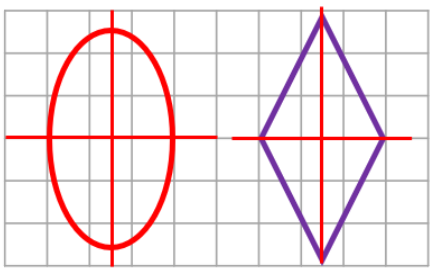


6b. True because each group contains 7 circles.

Greater Depth

7b. Jill is incorrect because 20 ÷ 4 = 5 so there will be 5 basketballs in each equal group.

8b. Various answers, for example:



9b. True because each group contains 3 L-shapes so each group is equal.