

Reasoning and Problem Solving

Step 1: Make Equal Parts

National Curriculum Objectives:

Mathematics Year 2: (2F1a) [Recognise, find, name and write fractions \$\frac{1}{3}\$, \$\frac{1}{4}\$, \$\frac{2}{4}\$ and \$\frac{3}{4}\$ of a length, shape, set of objects or quantity](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Explain whether the given part is correct when dividing objects into equal and unequal parts. Includes dividing objects arranged in an array into 2 equal parts.

Expected Explain whether the given part is correct when dividing objects into equal and unequal parts. Includes dividing objects arranged in arrays and at random, into up to 3 or 4 equal or unequal parts.

Greater Depth Explain whether the given part is correct when dividing objects into equal and unequal parts. Includes dividing objects arranged in arrays and at random, into 4 or more equal or unequal parts.

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 a variety of shapes.

Questions 3, 6 and 9 (Reasoning)

Developing Explain whether a group of objects has been divided into equal parts. Using groups arranged in arrays, divided into 2 parts.

Expected Explain whether a group of objects has been divided into equal parts. Using groups arranged in arrays and at random, divided into up to 4 parts.

Greater Depth Explain whether a group of objects has been divided into equal parts. Using groups arranged at random, divided into 4 or more parts.

More [Year 1 and 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 parts, there will be 8 in each part.



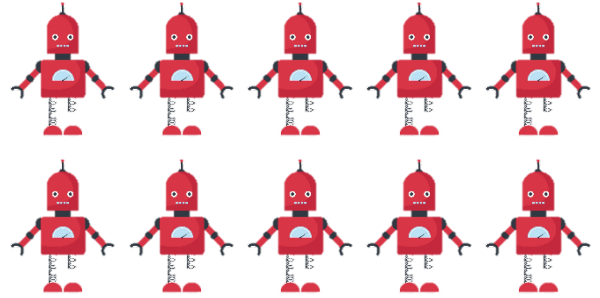
Is Jack correct? Explain why.



2 R

Make Equal Parts

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

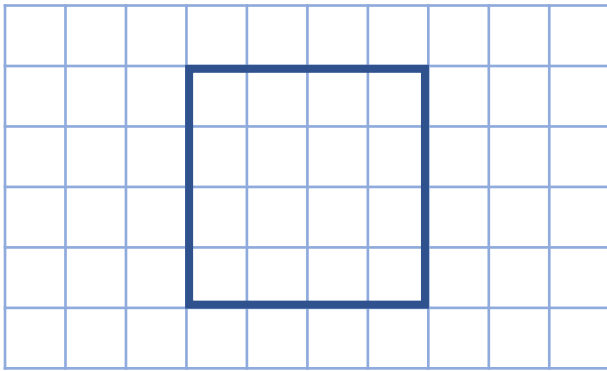


Is Sasha correct? Explain why.



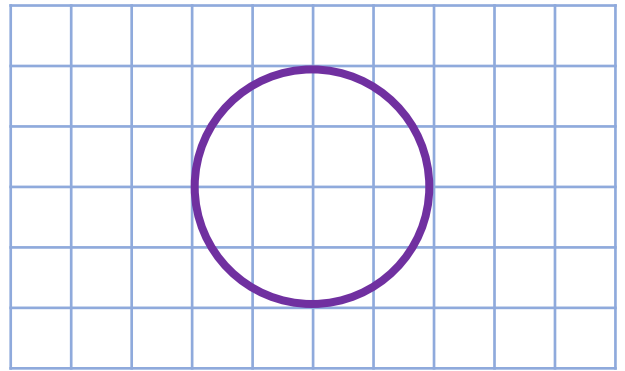
2 R

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



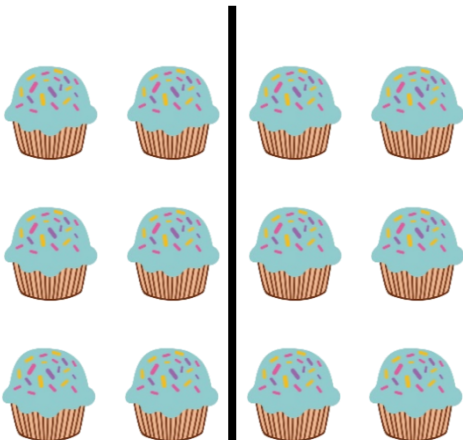
2 PS

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



2 PS

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

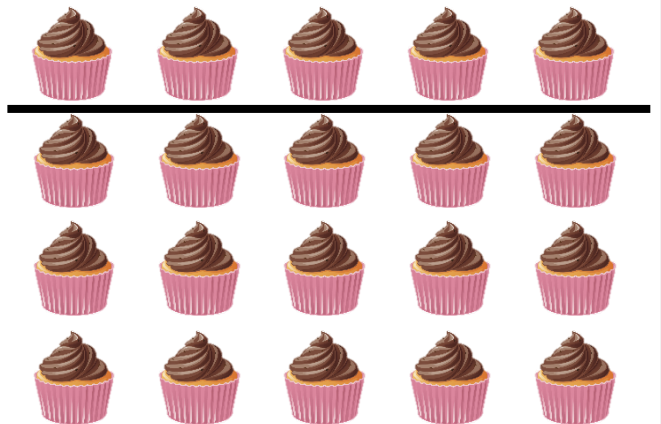


Prove it.



2 R

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



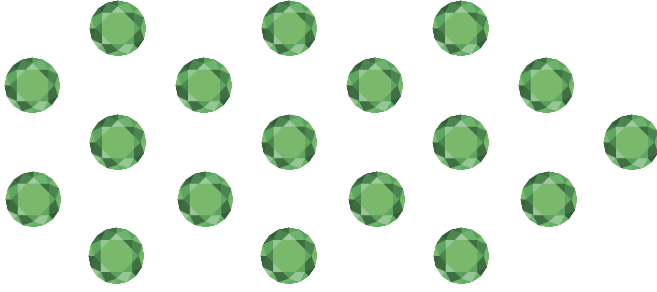
Prove it.



2 R

Make Equal Parts

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



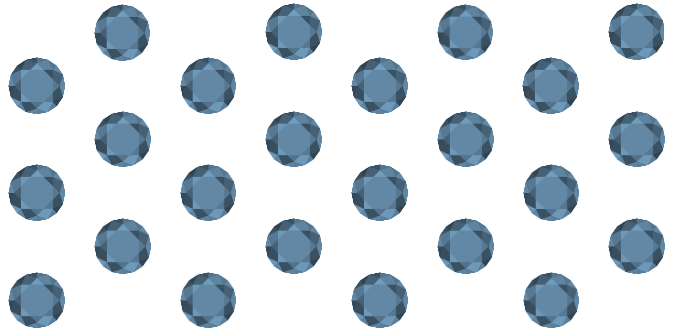
Is Daisy correct? Explain why.



2 R

Make Equal Parts

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

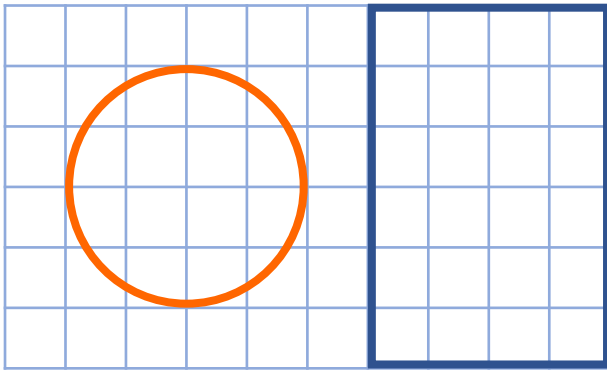


Is Mo correct? Explain why.



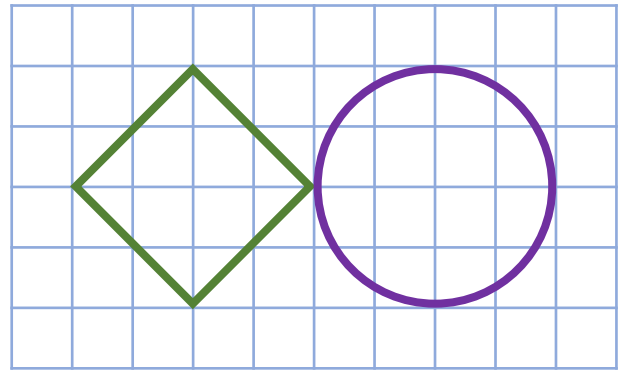
2 R

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



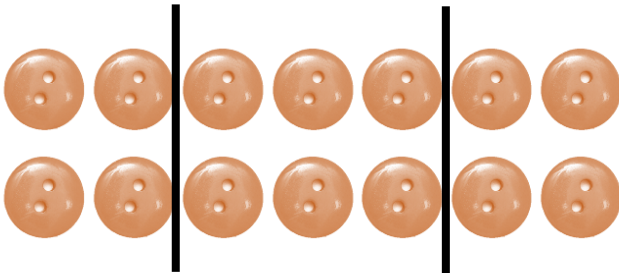
2 PS

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



2 PS

6a. True or false? All the parts are unequal.

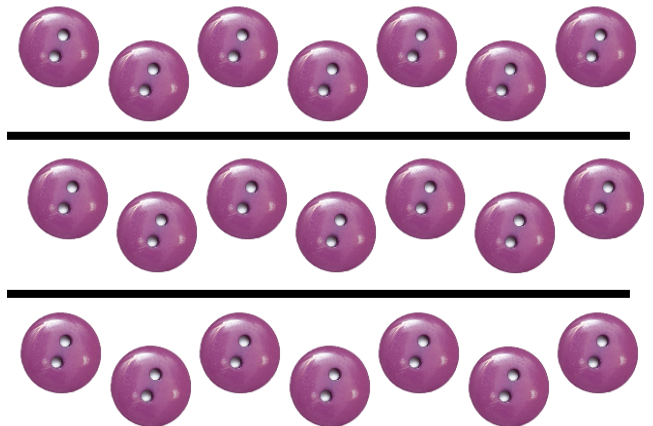


Prove it.



2 R

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



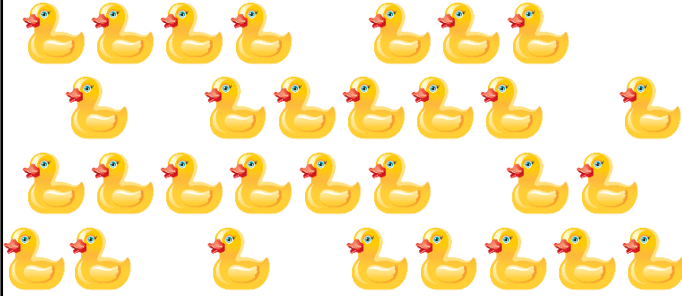
Prove it.



2 R

Make Equal Parts

7a. Omar thinks that if he divides the ducks into 5 equal parts, there will be 6 in each part.



Is Omar correct? Explain why.



2 R

Make Equal Parts

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

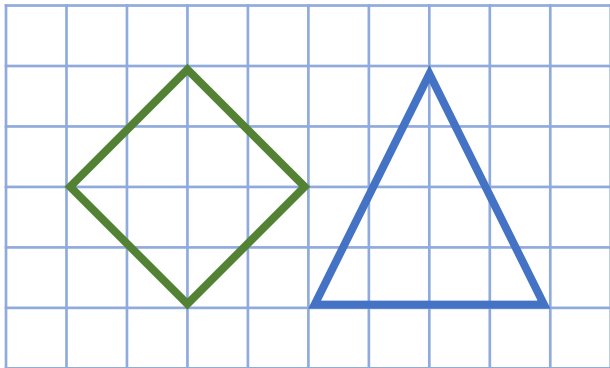


Is Jill correct? Explain why.



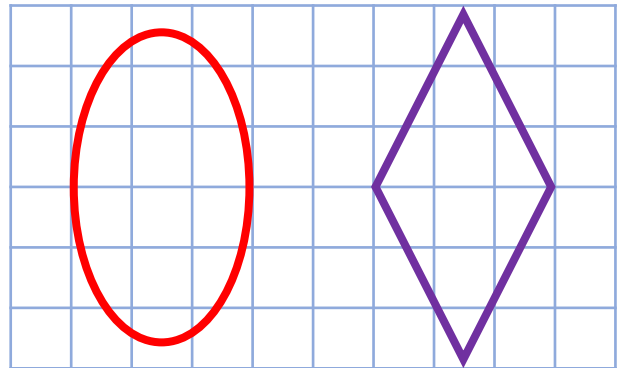
2 R

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



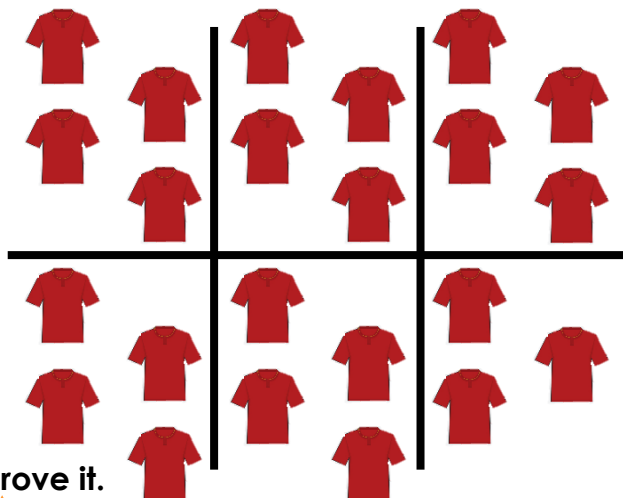
2 PS

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



2 PS

9a. True or false? All the parts are equal.

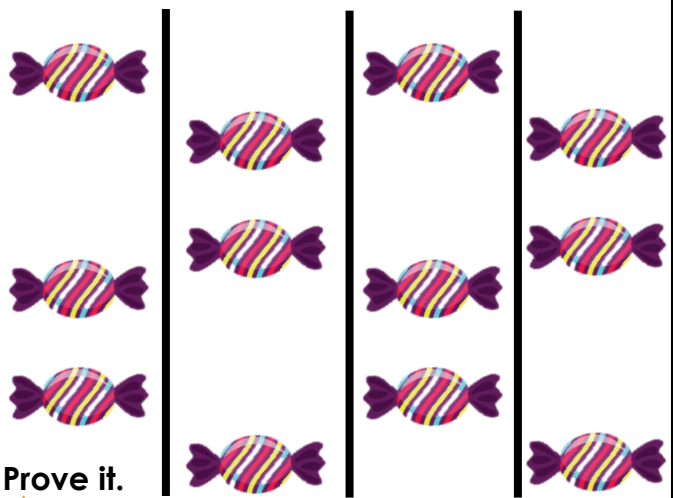


Prove it.



2 R

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



Prove it.



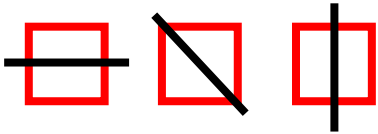
2 R

Reasoning and Problem Solving Make Equal Parts

Developing

1a. Jack is incorrect. There are 6 in each equal part.

2a. Various answers, for example:

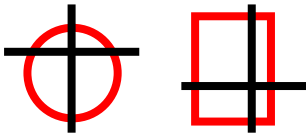


3a. True. There are 6 cupcakes in each equal part.

Expected

4a. Daisy is incorrect. There are 6 in each equal part.

5a. Various answers, for example:

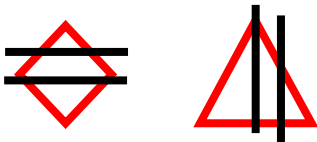


6a. False. Two of the parts are equal, one of the parts is not.

Greater Depth

7a. Omar is correct; $30 \div 5 = 6$.

8a. Various answers, for example:



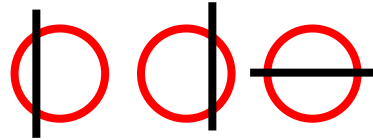
9a. False. Five of the parts are equal, one of the parts is not.

Reasoning and Problem Solving Make Equal Parts

Developing

1b. Sasha is correct; $10 \div 2 = 5$.

2b. Various answers, for example:

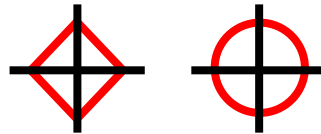


3b. True. Unequal parts are not the same. There are 5 in one part and 15 in the other.

Expected

4b. Mo is correct; $24 \div 4 = 6$.

5b. Various answers, for example:

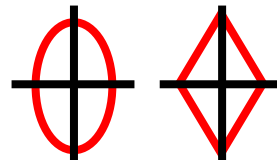


6b. True; each group contains seven buttons.

Greater Depth

7b. Jill is incorrect. There will be 5 basketballs in each equal part.

8b. Various answers, for example:



9b. True; each group contains 3 sweets.