

# Reasoning and Problem Solving

## Step 2: Recognise a Half

### 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 if an image including one object divided by a vertical line represents a half.

**Expected** Explain if an image including a number of objects represents a half. Objects divided by a horizontal or vertical line.

**Greater Depth** Explain if an image including a number of mixed objects, divided by a vertical or diagonal line, represents a half.

Questions 2, 5 and 8 (Problem Solving)

**Developing** Match the halves together and complete the half for the odd one out; using shapes. Shapes include circles and squares.

**Expected** Match the halves together and complete the half for the odd one out; using objects.

**Greater Depth** Match the halves together and complete the half for the odd one out; using objects in different orders and/or mixed objects.

Questions 3, 6 and 9 (Reasoning)

**Developing** Explain which statement about the half of a shape is correct and why. Shapes include circles and squares.

**Expected** Explain which statement about the half of an object or shape, including circle, triangles and quadrilaterals when the half is shown using a horizontal or vertical line, is correct and why.

**Greater Depth** Explain which statement about the half of an object or shape, including circles, triangles, quadrilaterals and polygons when the half is shown using a mixture of horizontal, vertical or diagonal lines is correct and why.

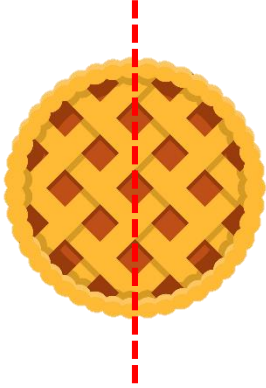
More [Year 2 Fractions](#) resources.

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

## Recognise a Half

## Recognise a Half

1a. True or false? The following object is divided into half.

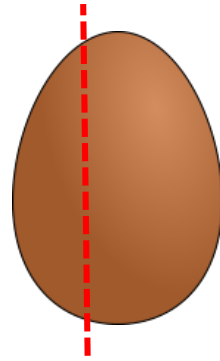


Explain how you know.



R

1b. True or false? The following object is divided into half.



Explain how you know.



R

2a. Match the halves to find the odd one out.

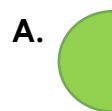


Draw the matching half for the odd one out.



PS

2b. Match the halves to find the odd one out.



Draw the matching half for the odd one out.



PS

3a. Amy and Zac are talking about halves.



It is not a half because the shape is not in two equal parts.

It is a  $\frac{1}{2}$  because 1 add 2 is 3 and there are three parts.

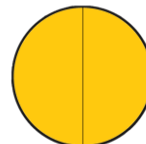


Who is correct? Convince me.



R

3b. Beth and Tom are talking about halves.



It is not a half because the whole shape is shaded.

It is a  $\frac{1}{2}$  because there are 2 equal parts.



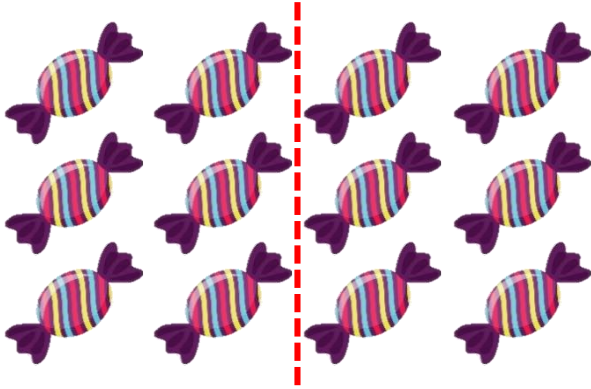
Who is correct? Convince me.



R

## Recognise a Half

4a. True or false? The following objects are divided into half.



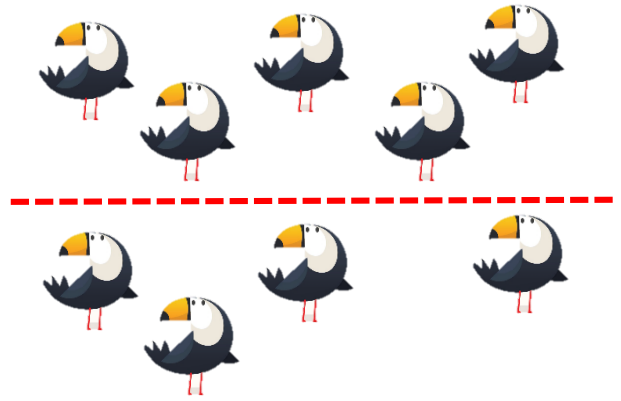
Explain how you know.



R

## Recognise a Half

4b. True or false? The following objects are divided into half.

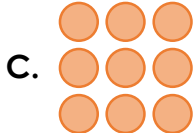
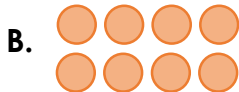
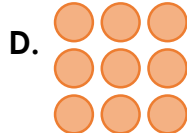
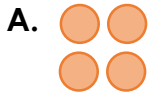


Explain how you know.



R

5a. Match the halves to find the odd one out.



Draw the matching half for the odd one out.



PS

5b. Match the halves to find the odd one out.



Draw the matching half for the odd one out.



PS

6a. Mary and Ashley are talking about halves.



It is not a half because the shape is not split down the middle.

It is  $\frac{1}{2}$  because the shape has two equal parts.



Who is correct? Convince me.



R

6b. Sam and Leah are talking about halves.



It is not a half because the parts are not equal.

It is a  $\frac{1}{2}$  because the shape has been split into two parts.



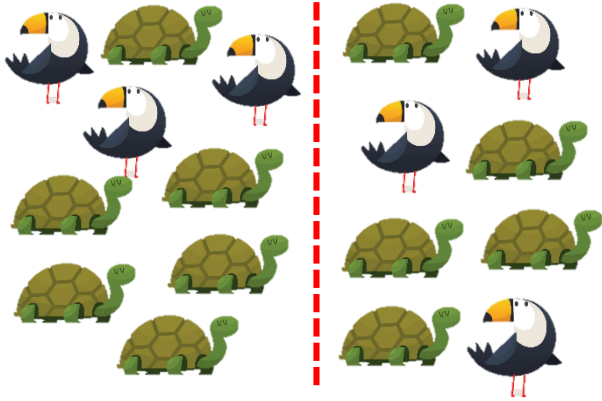
Who is correct? Convince me.



R

## Recognise a Half

7a. True or false? The following objects are divided into half.



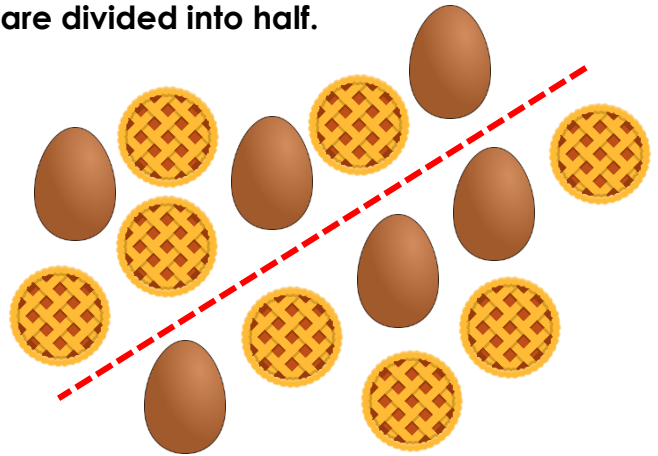
Explain how you know.



R

## Recognise a Half

7b. True or false? The following objects are divided into half.

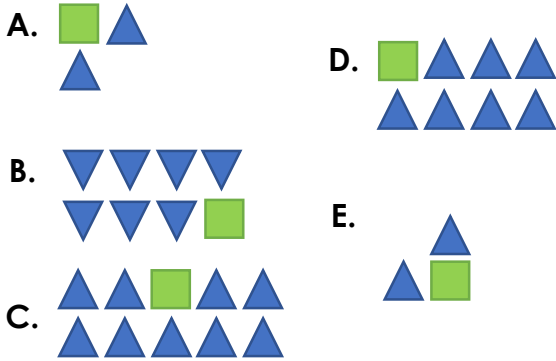


Explain how you know.



R

8a. Match the halves to find the odd one out.

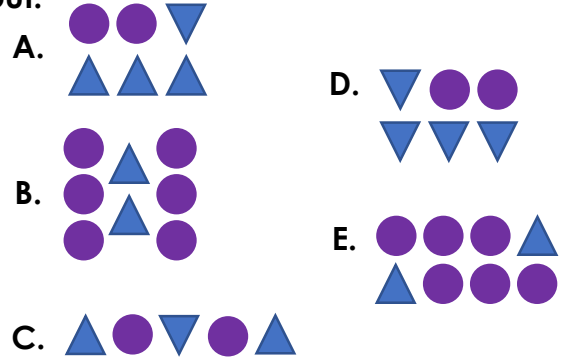


Draw the matching half for the odd one out.



PS

8b. Match the halves to find the odd one out.



Draw the matching half for the odd one out.



PS

9a. Dom and Layla are talking about halves.



It is not a  $\frac{1}{2}$  because there is more than one shaded part.

It is a half because the two parts together equal half of the whole shape.



Who is correct? Convince me.



R

9b. Isra and Luke are talking about halves.



It is not a  $\frac{1}{2}$  because if you fold the shape along the line the shape is not equal.

It is a half because if you cut along the line and match the parts up they are equal.



Who is correct? Convince me.



R

## Reasoning and Problem Solving

### Recognise a Half

#### Developing

- 1a. True because the two parts are equal.
- 2a. C is the odd one out. Drawing of half a circle.
- 3a. Amy is correct because to make a half there needs to be 2 equal parts.

#### Expected

- 4a. True because each half has an equal number of sweets.
- 5a. B is the odd one out. Accept a drawing of 8 circles.
- 6a. Ashley is correct because it does not matter which way the shape is divided as long as the two parts are equal.

#### Greater Depth

- 7a. False because each half does not have an equal number of tortoises.
- 8a. C is the odd one out. Accept a drawing of 9 triangles and 1 square.
- 9a. Layla is correct because the two parts equal half of the shape.

## Reasoning and Problem Solving

### Recognise a Half

#### Developing

- 1b. False because the two parts are not equal.
- 2b. B is the odd one out. Drawing of half of a rectangle.
- 3b. Tom is correct because to make a half there needs to be 2 equal parts.

#### Expected

- 4b. False because each half does not have an equal number of birds.
- 5b. E is the odd one out. Accept a drawing of 5 triangles.
- 6b. Sam is correct because the two parts must be equal.

#### Greater Depth

- 7b. True because each half has an equal number of eggs and pies.
- 8b. C is the odd one out. Accept a drawing that includes 2 circles and 3 triangles.
- 9b. Luke is correct because the two parts are equal.