Reasoning and Problem Solving
Step 4: Fractions Greater Than 1

National Curriculum Objectives:

Mathematics Year 4: (4F2) **Recognise and show, using diagrams, families of common equivalent fractions**

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Use clues to identify the fractions greater than 1. Includes halves, quarters and thirds, and uses improper fractions.
Expected Use clues to identify the fractions greater than 1. Includes improper fractions.
Greater Depth Use clues to identify the fractions greater than 1. Uses knowledge of equivalent fractions.

Questions 2, 5 and 8 (Reasoning)
Developing Identify and explain whether a statement describing an image is true. Includes halves, quarters and thirds; uses improper fractions and fractions partitioned into wholes and parts of a fraction.
Expected Identify and explain whether a statement describing an image is true. Includes improper fractions and fractions partitioned into wholes and parts of a fraction.
Greater Depth Identify and explain whether a statement describing an image is true. Uses knowledge of equivalent fractions.

Questions 3, 6 and 9 (Reasoning)
Developing Explain which statement is correct when comparing improper fractions and fractions partitioned into wholes and parts of a fraction. Includes halves, quarters and thirds.
Expected Explain which statement is correct when comparing improper fractions and fractions partitioned into wholes and parts of a fraction.
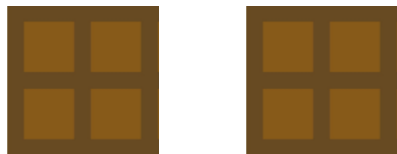**Greater Depth** Explain which statement is correct when comparing equivalent fractions.

More Year 4 Fractions resources.

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

Fractions Greater Than 1

Fractions Greater Than 1

1a. James and Chloe are sharing some chocolate. Together, they have eaten $\frac{7}{4}$ of the chocolate.

What fraction of chocolate could James and Chloe each have eaten? Show 3 combinations.

⭐ D

PS

1b. Brogan and Kira are sharing some pancakes. Together, they have eaten $\frac{6}{3}$ of the pancakes.
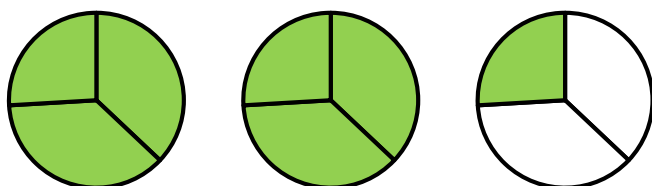
What fraction of pancakes could Brogan and Kira each have eaten? Show 3 combinations.

⭐ D

PS

2a. True or false? The shaded image shows one whole and two thirds.

Explain how you know.

⭐ D

R

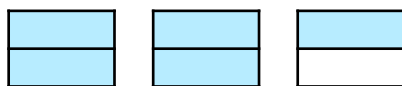**2b.** True or false? The shaded image shows nine halves.

Explain how you know.

⭐ D

R

3a. Simon and Daria are discussing this image:

Simon: It is two wholes and one half.

Daria: It is three wholes and one half.

Who is correct? Convince me.

⭐ D

R

3b. Elliot and Layla are discussing this image:
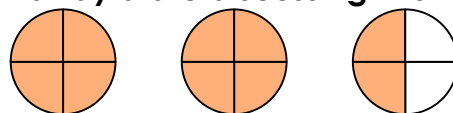
Elliot: It is ten quarters.

Layla: It is two wholes and two quarters.
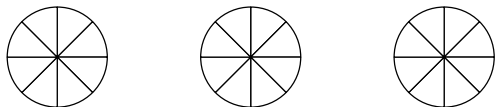
Who is correct? Convince me.

⭐ D

R

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4a. Jayden and Cherry are sharing some cakes. Together, they have eaten $\frac{17}{8}$ of the cakes.

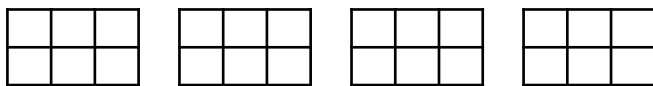Jayden ate more than one whole cake.

What fraction of cake could Jayden and Cherry each have eaten? Show 3 combinations.

PS

4b. Scarlett and Alfie are sharing some popcorn. Together, they have eaten $\frac{19}{6}$ of the popcorn.
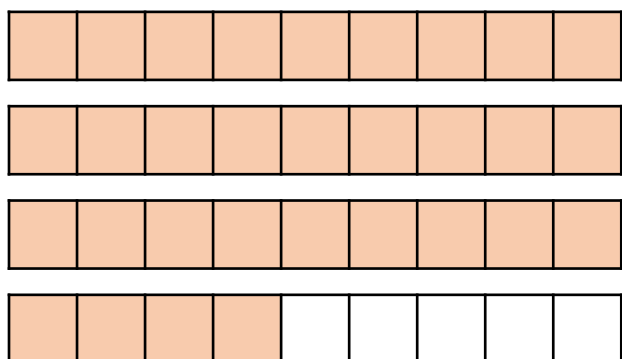
Alfie ate less than 12 sixths of popcorn.

What fraction of popcorn could Scarlett and Alfie each have eaten? Show 3 combinations.

PS

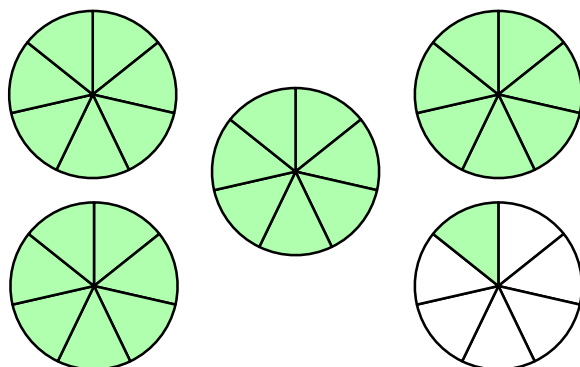**5a.** True or false? The shaded image shows three wholes and four eighths.

Explain how you know.

R

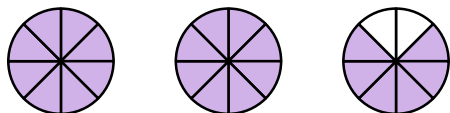**5b.** True or false? The shaded image shows twenty-nine sevenths.

Explain how you know.

R

6a. Daisy and Ahmed are discussing this image:

Daisy: It is two wholes and five eighths.

Ahmed: It is twenty-two eighths.

Who is correct? Convince me.

R

6b. Kara and George are discussing this image:
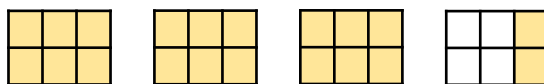
Kara: It is three wholes and two sixths.

George: It is eighteen sixths.

Who is correct? Convince me.

R

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Reasoning and Problem Solving – Fractions Greater Than 1 – Year 4 Expected

7a. Phoebe and Finn are sharing some pies. Together, they have eaten $\frac{29}{12}$ of the pies.

Finn ate more pie than Phoebe. Phoebe ate more than $\frac{5}{6}$ of a pie.

What fraction of pie could Phoebe and Finn each have eaten? Show 3 combinations.

GD / PS

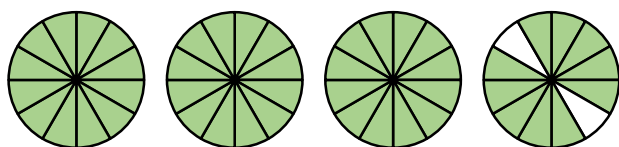**7b.** Julia and Max are sharing some waffles. Together, they have eaten $\frac{32}{10}$ of the waffles.

Julia ate less than $\frac{9}{5}$ of the waffles. Max ate more waffles than Julia.

What fraction of waffles could Julia and Max each have eaten? Show 3 combinations.

GD / PS

8a. True or false? The image below shows a fraction equivalent to $\frac{33}{9}$.

Explain how you know.

GD / R

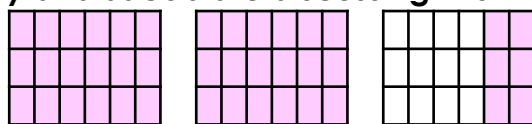**8b.** True or false? The image below shows a fraction equivalent to $\frac{60}{14}$.

Explain how you know.

GD / R

9a. Emily and Jacob are discussing this image:

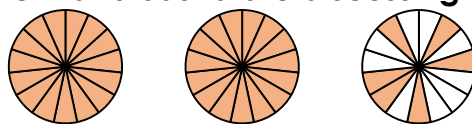Emily: It is twenty-eight twelfths.

Jacob: It is fourteen sixths.

Who is correct? Convince me.

GD / R

9b. Clement and Sasha are discussing this image:

Clement: It is twenty-four tenths.

Sasha: It is two wholes and one half.

Who is correct? Convince me.

GD / R

Reasoning and Problem Solving – Fractions Greater Than 1 – Year 4 Greater Depth

Developing

1a. Various answers, for example:

$\frac{1}{4}$ and $\frac{6}{4}$; $\frac{2}{4}$ and $\frac{5}{4}$; $\frac{3}{4}$ and $\frac{4}{4}$.

2a. False. The image shows seven thirds which is equal to two wholes and one third.

3a. Simon is correct because there are two whole shapes shaded and one half of the third shape.

Expected

4a. Various answers, for example:

$\frac{9}{8}$ and $\frac{8}{8}$; $\frac{10}{8}$ and $\frac{7}{8}$; $\frac{11}{8}$ and $\frac{6}{8}$ Jayden must have more than 1.

5a. False. The image is split into ninths. The image shows thirty-one ninths which is equal to three wholes and four ninths.

6a. Ahmed is correct because the fraction shown is two wholes and six eighths which is equivalent to twenty-two eighths.

Greater Depth

7a. Various answers, for example:

$\frac{12}{12}$ and $\frac{17}{12}$; $\frac{11}{12}$ and $\frac{18}{12}$; $\frac{14}{12}$ and $\frac{15}{12}$ Accept correct answers given in sixths.

8a. False. The image shows forty-six twelfths which doesn't have an equivalent of ninths.

9a. Emily and Jacob are both correct because the fraction shown is forty-two eighteenths which is equivalent to twenty-eight twelfths and fourteen sixths.

Developing

1b. Various answers, for example:

$\frac{1}{3}$ and $\frac{5}{3}$; $\frac{2}{3}$ and $\frac{4}{3}$; $\frac{3}{3}$ and $\frac{3}{3}$

2b. False. The image shows two wholes and one half which is equal to five halves.

3b. Elliot and Layla are both correct because ten quarters is equivalent to two wholes and two quarters.

Expected

4b. Various answers, for example:

$\frac{11}{6}$ and $\frac{8}{6}$; $\frac{10}{6}$ and $\frac{9}{6}$; $\frac{5}{6}$ and $\frac{14}{6}$ Alfie must have less than $\frac{12}{6}$.

5b. True. The image shows four wholes and one seventh which is equal to twenty-nine sevenths.

6b. Kara is correct because there are three whole shapes shaded and two sixths of the fourth shape.

Greater Depth

7b. Various answers, for example:

$\frac{4}{5}$ and $\frac{12}{5}$; $\frac{6}{5}$ and $\frac{10}{5}$; $\frac{5}{5}$ and $\frac{11}{5}$ Accept correct answers given in tenths. Max must eat more than Julia and Julia must have less than $\frac{9}{5}$.

8b. False. The image shows ninety-nine twenty-firsts which is equivalent to sixty-six fourteenths.

9b. Clement is correct because the fraction shown is thirty-six fifteenths which is equivalent to twenty-four tenths.