

Discussion Problems

Step 2: Equivalent Fractions 1

Teaching note: An A3 copy on card and scissors may be necessary.

National Curriculum Objectives:

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

About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 4 Fractions](#) resources.

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

Equivalent Fractions 1

1. Play a game of matching pairs with a partner. Cut out the cards carefully before you start.

How to play:

1. Mix the cards up and place them face down on the table.
2. Take it in turns to turn over two cards.
3. If you turn over equivalent fractions, keep them. If you don't, turn them back over.
4. Play until all cards have been used. The winner has the most pairs at the end.

$$\frac{4}{10}$$

$$\frac{4}{6}$$

$$\frac{15}{20}$$

$$\frac{6}{18}$$

$$\frac{18}{21}$$

$$\frac{5}{6}$$

$$\frac{6}{15}$$

$$\frac{14}{21}$$

$$\frac{6}{8}$$

$$\frac{10}{30}$$

$$\frac{12}{14}$$

$$\frac{15}{18}$$

DP

2. Alfred, the Queen's assistant, has forgotten the code to the safe and the Queen wants her crown! The code is a combination of three equivalent fractions using the numbers 1 to 15. Each number can be used once in a code.

$$\frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$$



Explore the possible combinations Alfred could try.

Alfred finds a clue to help him crack the code:

The denominators in the code have a common factor of 4. Improper fractions may also have been used.

Investigate what the combination could be now.

DP

Equivalent Fractions 1

1. Play a game of matching pairs with a partner. Cut out the cards carefully before you start.

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$\frac{4}{10}$	$\frac{4}{6}$	$\frac{15}{20}$	$\frac{6}{18}$	$\frac{18}{21}$	$\frac{5}{6}$
$\frac{6}{15}$	$\frac{14}{21}$	$\frac{6}{8}$	$\frac{10}{30}$	$\frac{12}{14}$	$\frac{15}{18}$

DP

2. Alfred, the Queen's assistant, has forgotten the code to the safe and the Queen wants her crown! The code is a combination of three equivalent fractions using the numbers 1 to 15. Each number can be used once in a code.

$$\frac{1}{2} = \frac{3}{6} = \frac{4}{8}$$



Explore the possible combinations Alfred could try.

Various answers, for example: see above.

Alfred finds a clue to help him crack the code:

The denominators in the code have a common factor of 4. Improper fractions may also have been used.

Investigate what the combination could be now.

Various answers, for example: $\frac{5}{4} = \frac{10}{8} = \frac{15}{12}$

DP