Simplify fractions

1

1									
$\frac{1}{2}$					$\frac{1}{2}$				
$\frac{1}{3}$			$\frac{1}{3}$			$\frac{1}{3}$			
$\frac{1}{4}$		$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$	
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$		$\frac{1}{7}$	
$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$	
$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$		$\frac{1}{9}$	
$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$		$\frac{1}{10}$	

Use the fraction wall to write each fraction in its simplest form.

a) $\frac{4}{6} =$ $\frac{2}{3}$

b) $\frac{8}{10} =$ $\frac{4}{5}$

c) $\frac{6}{8} =$ $\frac{3}{4}$

d) $\frac{4}{8} =$ $\frac{1}{2}$

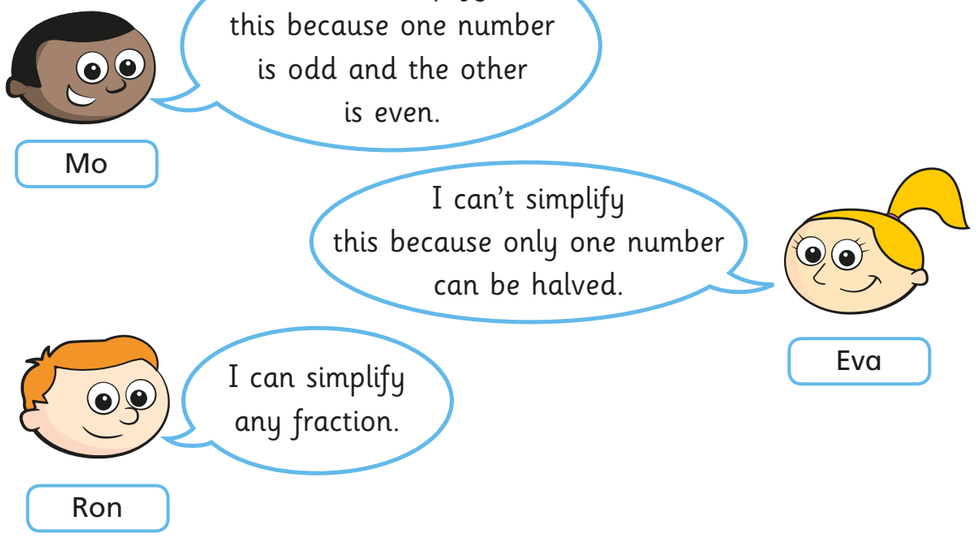
2 **a)** Use a fraction wall to explain why $\frac{7}{10}$ does not simplify.

It is already in its simplest form.

b) Find three more fractions on the fraction wall that cannot be simplified.

e.g. $\frac{2}{3}$ $\frac{3}{7}$ $\frac{9}{10}$

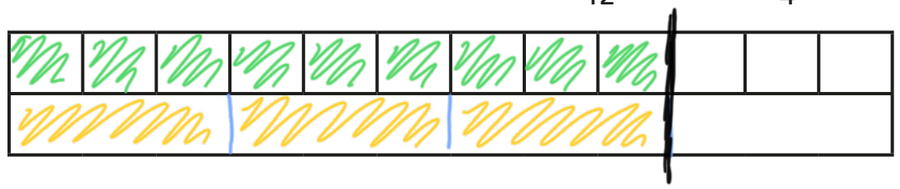
3 Mo, Eva and Ron are trying to simplify $\frac{5}{20}$



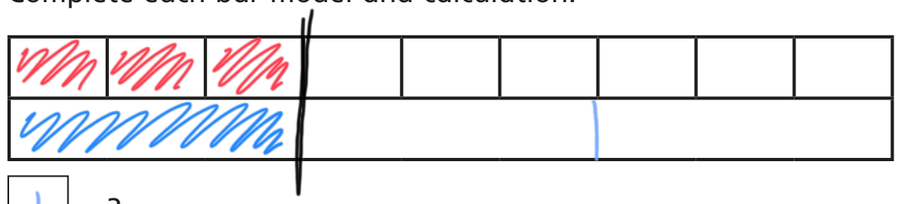
Do you fully agree, partly agree or completely disagree with each person?

Talk to a partner.

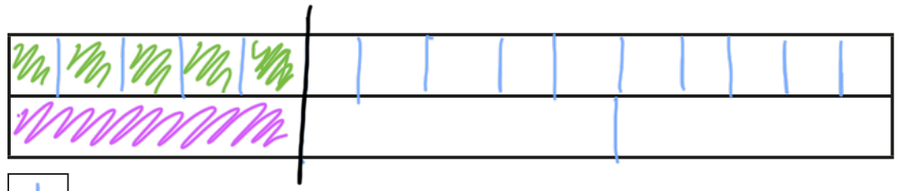
4 **a)** Draw lines on the bar model to show that $\frac{9}{12}$ is equal to $\frac{3}{4}$



b) Complete each bar model and calculation.



$\frac{1}{3} = \frac{3}{9}$



$\frac{1}{3} = \frac{5}{15}$

5 Simplify the fractions.

a) $\frac{4}{12} = \frac{1}{3}$ **b)** $\frac{8}{12} = \frac{2}{3}$ **c)** $\frac{40}{120} = \frac{1}{3}$ **d)** $\frac{12}{4} = 3$

$\frac{4}{16} = \frac{1}{4}$ $\frac{8}{16} = \frac{1}{2}$ $\frac{40}{160} = \frac{1}{4}$ $\frac{120}{4} = 30$

$\frac{4}{20} = \frac{1}{5}$ $\frac{8}{20} = \frac{2}{5}$ $\frac{40}{200} = \frac{1}{5}$ $\frac{12}{400} = \frac{3}{100}$

Describe and explain any patterns that you noticed.

Various answers

6 Write 3 fractions that simplify to $\frac{3}{5}$

e.g. $\frac{6}{10}$ $\frac{9}{15}$ $\frac{12}{20}$

7 Teddy and Dora are both simplifying $\frac{30}{42}$

Teddy

$\frac{30}{42} = \frac{15}{21} = \frac{5}{7}$

Dora

$\frac{30}{42} = \frac{5}{7}$

a) How do you think Dora was able to simplify the fraction in one step?

b) Simplify these fractions in one step.

$\frac{24}{30} = \frac{4}{5}$ $\frac{16}{20} = \frac{4}{5}$

$\frac{56}{64} = \frac{7}{8}$ $\frac{99}{121} = \frac{9}{11}$

8 $\frac{\text{star}}{\text{heart}}$  is a prime number.  is a multiple of 10

The fraction can be simplified.

What could each number be? Explain your reasoning.

E.g. 2 is prime, 20 is a multiple of 10 and $\frac{2}{20} = \frac{1}{10}$ so star could be 2 and heart could be 20