Year 6

Monday 4th May 2020

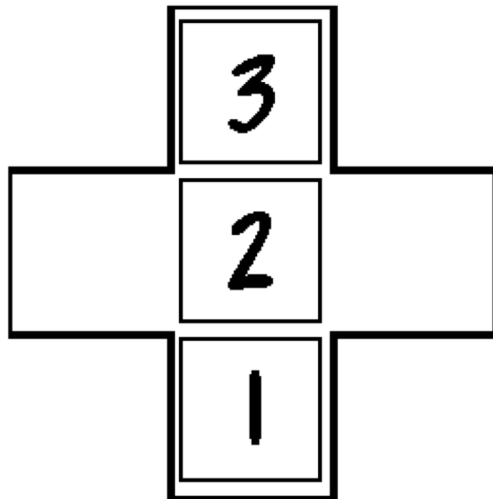# Maths

LO: to simplify fractions

The Puzzle:

The diagram below shows a cross-shaped box containing three numbered blocks.

The puzzle is to slide the blocks around the box until the numbers read 1,2,3 as you go down.

How do you do it? And how many moves does it take?

Simplify the fractions using the bar models.

1:

$$\frac{2}{6} = \frac{}{}$$

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

2: Dora has been asked to simplify

$$\frac{35}{40}$$

$$\frac{35}{40} = \frac{7}{10}$$

Is she correct?

3: Simplify

$$\frac{63}{70}$$

$$\frac{15}{60}$$

This will teach you everything you need to know about simplifying fractions.

The independent work continues on the next two slides.

Simplify fractions

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The fraction wall shows:

$\frac{1}{2}$, $\frac{1}{2}$

$\frac{1}{3}$, $\frac{1}{3}$, $\frac{1}{3}$

$\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$

$\frac{1}{5}$, $\frac{1}{5}$, $\frac{1}{5}$, $\frac{1}{5}$, $\frac{1}{5}$

$\frac{1}{6}$, $\frac{1}{6}$, $\frac{1}{6}$, $\frac{1}{6}$, $\frac{1}{6}$, $\frac{1}{6}$

$\frac{1}{7}$, $\frac{1}{7}$, $\frac{1}{7}$, $\frac{1}{7}$, $\frac{1}{7}$, $\frac{1}{7}$, $\frac{1}{7}$

$\frac{1}{8}$, $\frac{1}{8}$, $\frac{1}{8}$, $\frac{1}{8}$, $\frac{1}{8}$, $\frac{1}{8}$, $\frac{1}{8}$, $\frac{1}{8}$

$\frac{1}{9}$, $\frac{1}{9}$, $\frac{1}{9}$, $\frac{1}{9}$, $\frac{1}{9}$, $\frac{1}{9}$, $\frac{1}{9}$, $\frac{1}{9}$, $\frac{1}{9}$

$\frac{1}{10}$, $\frac{1}{10}$, $\frac{1}{10}$, $\frac{1}{10}$, $\frac{1}{10}$, $\frac{1}{10}$, $\frac{1}{10}$, $\frac{1}{10}$, $\frac{1}{10}$, $\frac{1}{10}$
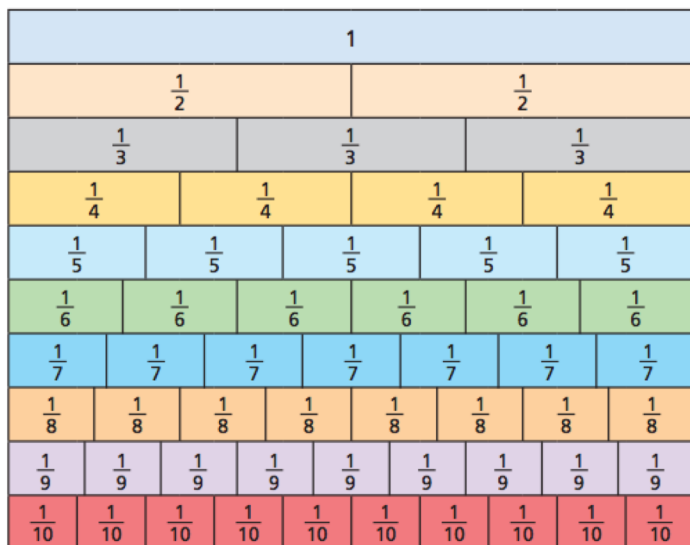
Use the fraction wall to write each fraction in its simplest form.

a) $\frac{4}{6} = \boxed{}$

c) $\frac{6}{8} = \boxed{}$

b) $\frac{8}{10} = \boxed{}$

d) $\frac{4}{8} = \boxed{}$

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

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

$\boxed{}$ $\boxed{}$ $\boxed{}$

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

> I can't simplify this because one number is odd and the other is even.
> **Mo**

> I can't simplify this because only one number can be halved.
> **Eva**

> I can simplify any fraction.
> **Ron**

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.

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

$\boxed{} = \frac{5}{15}$

5 Simplify the fractions.

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

$\frac{4}{16} = \boxed{}$ $\frac{8}{16} = \boxed{}$ $\frac{40}{160} = \boxed{}$ $\frac{120}{4} = \boxed{}$

$\frac{4}{20} = \boxed{}$ $\frac{8}{20} = \boxed{}$ $\frac{40}{200} = \boxed{}$ $\frac{12}{400} = \boxed{}$

Describe and explain any patterns that you noticed.

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

$\boxed{}$ $\boxed{}$ $\boxed{}$

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.

$\frac{24}{30} = \boxed{}$ $\frac{16}{20} = \boxed{}$

$\frac{56}{64} = \boxed{}$ $\frac{99}{121} = \boxed{}$

Ext

⭐ is a prime number.   💛 is a multiple of 10.

The fraction $\frac{⭐}{💗}$ can be simplified.

What could each number be? Explain your reasoning.

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