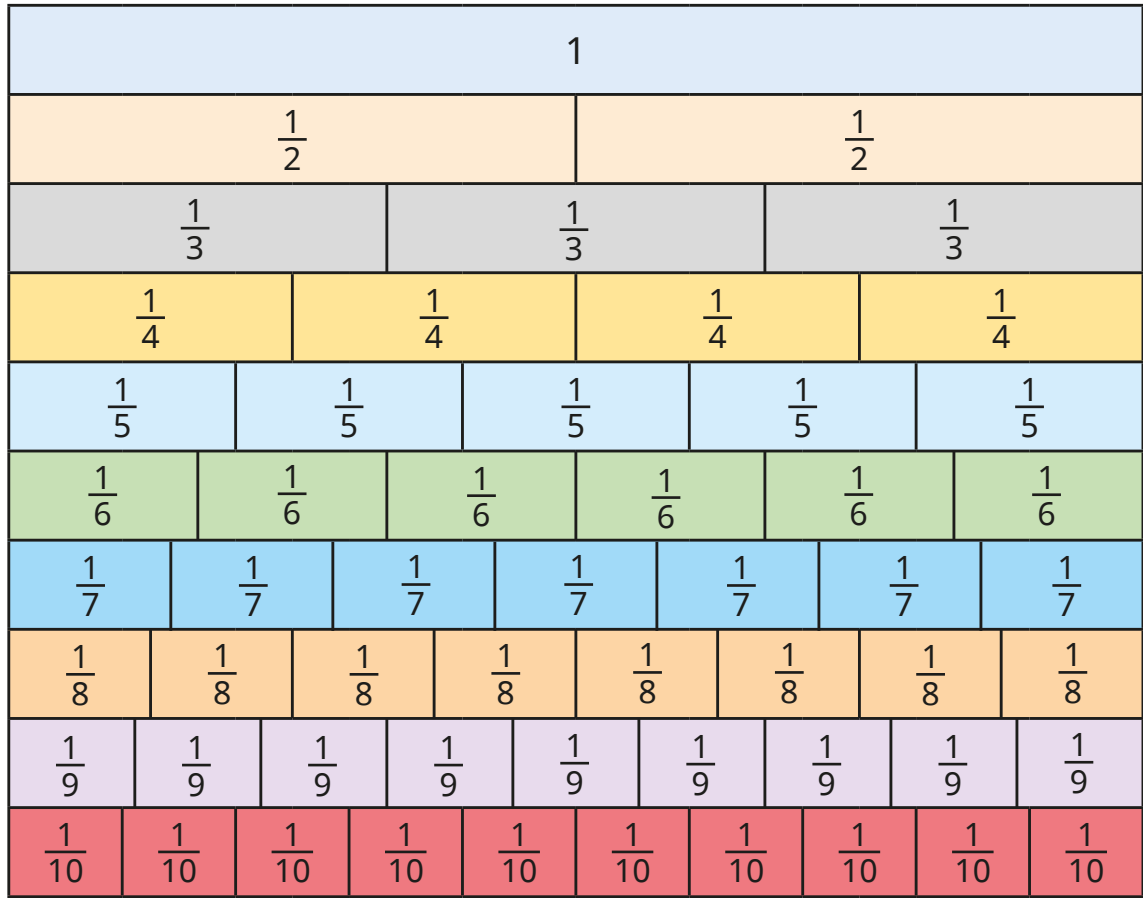


# Equivalent fractions and simplifying



1 Here is a fraction wall.



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

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

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

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

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

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.

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

I cannot simplify this, because one number is odd and the other is even.

Mo

I cannot 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?

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Talk about it with 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.


$$\frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}} = \frac{3}{9}$$


$$\frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}} = \frac{5}{15}$$

- 5 Simplify the fractions.

a)  $\frac{4}{12} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$     b)  $\frac{8}{12} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$     c)  $\frac{40}{120} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$     d)  $\frac{12}{4} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$

$\frac{4}{16} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$      $\frac{8}{16} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$      $\frac{40}{160} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$      $\frac{120}{4} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$

$\frac{4}{20} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$      $\frac{8}{20} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$      $\frac{40}{200} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$      $\frac{12}{400} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$

Describe and explain any patterns that you notice.

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

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

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

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

- b) Simplify these fractions in one step.


$$\frac{24}{30} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

$$\frac{16}{20} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

$$\frac{56}{64} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

$$\frac{99}{121} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

- 8  is a prime number.

 is a multiple of 10

The fraction  $\frac{\text{star}}{\text{heart}}$  can be simplified.

Find a pair of possible values.

$$\frac{\text{star}}{\text{heart}} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

Are there any other possible answers? Talk about it with a partner.