Equivalent Fractions

L.O. **To be able to find equivalent fractions and to simplify fractions.**

Can you remember the meaning of these words?

$\frac{1}{8}$

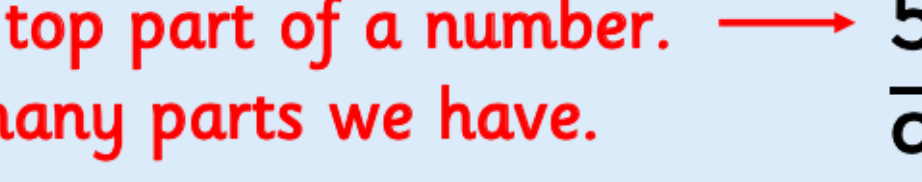
numerator

$\frac{1}{4}$

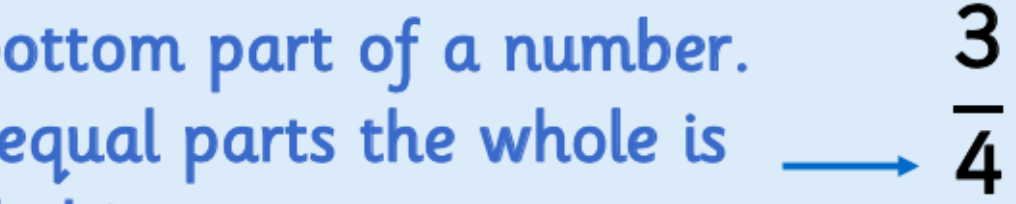
denominator

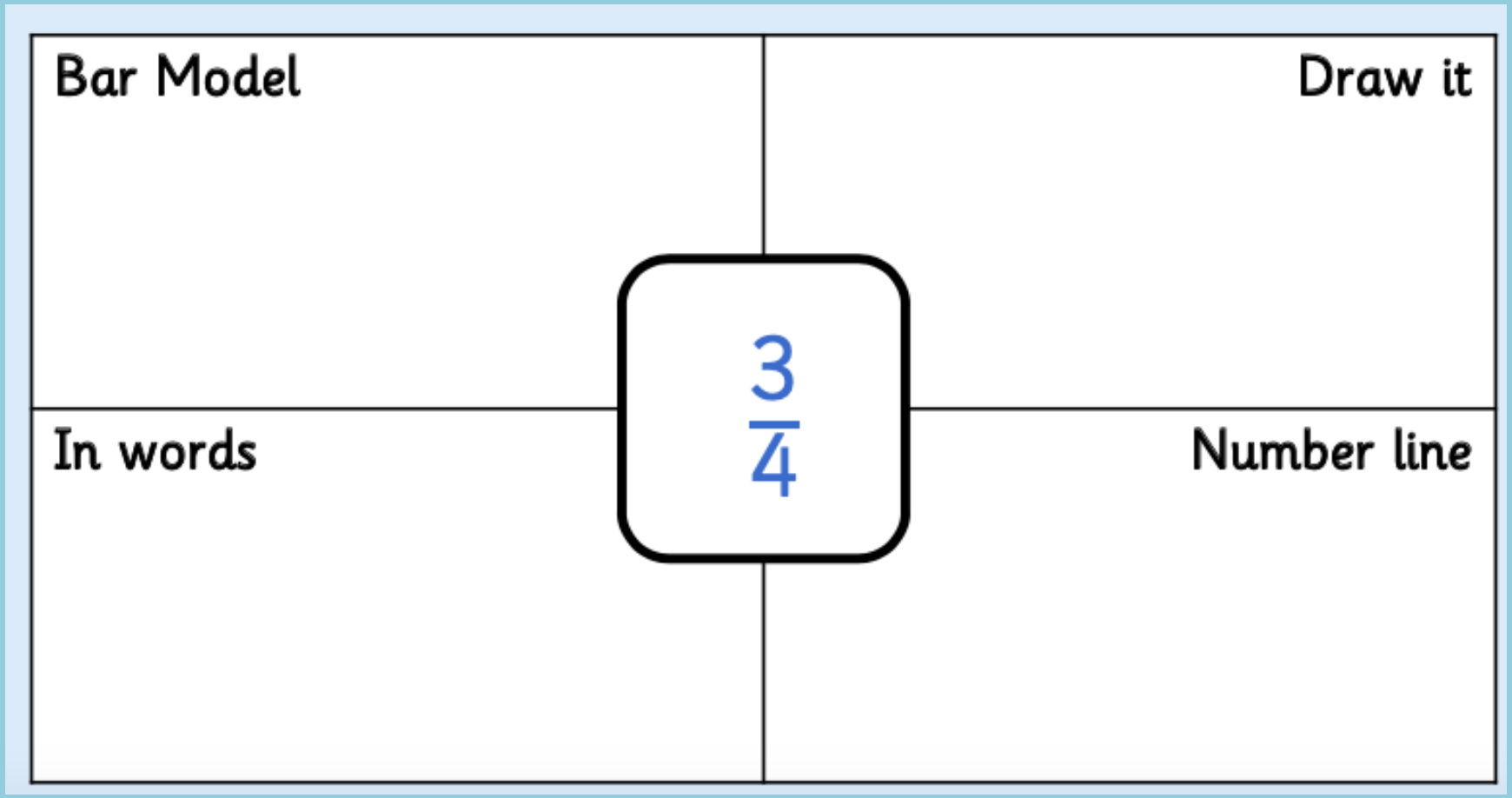
$\frac{5}{9}$

Numerator – The top part of a number. It shows how many parts we have.



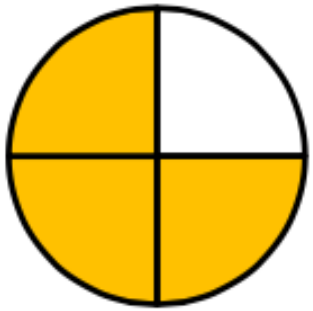
Denominator – The bottom part of a number. It shows how many equal parts the whole is divided into.




Bar Model
Draw it
3/4
In words
Number line

Bar Model

Draw it

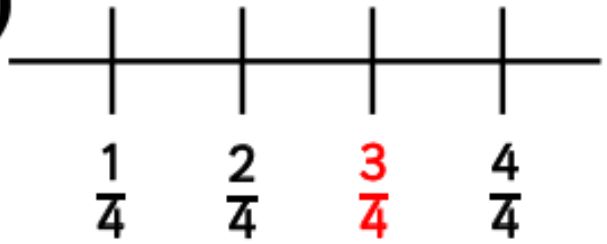


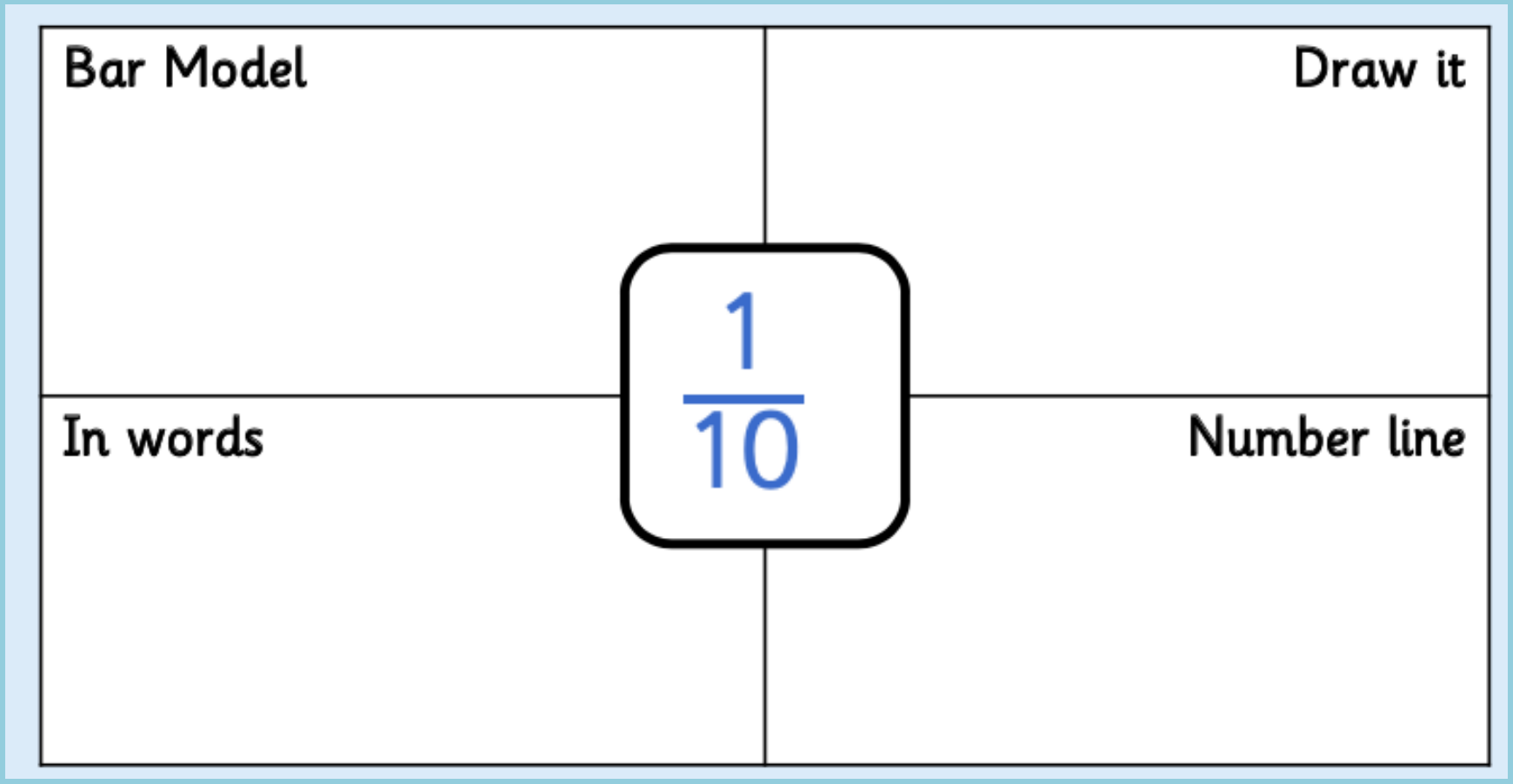
$\frac{3}{4}$

In words

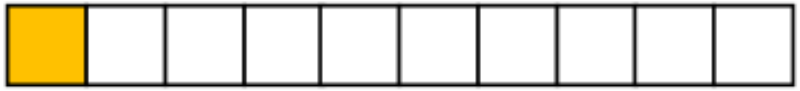
Three quarters.

Number line




Bar Model
Draw it
1
10
In words
Number line

Bar Model



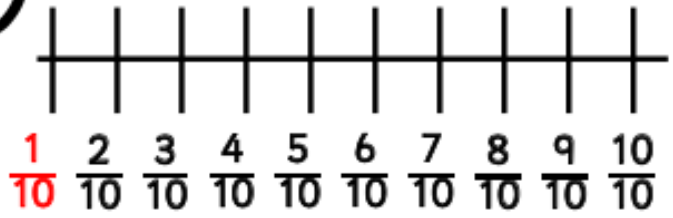
Draw it

$$\frac{1}{10}$$

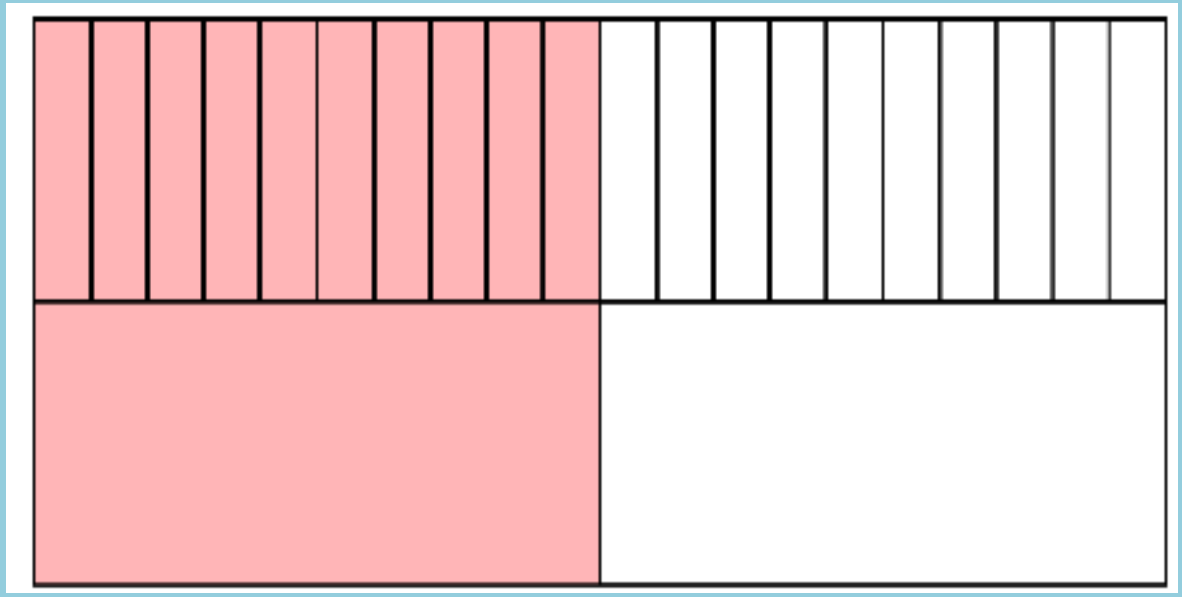
In words

One tenth.

Number line



$$\frac{10}{20} \text{ or } \frac{1}{2}$$

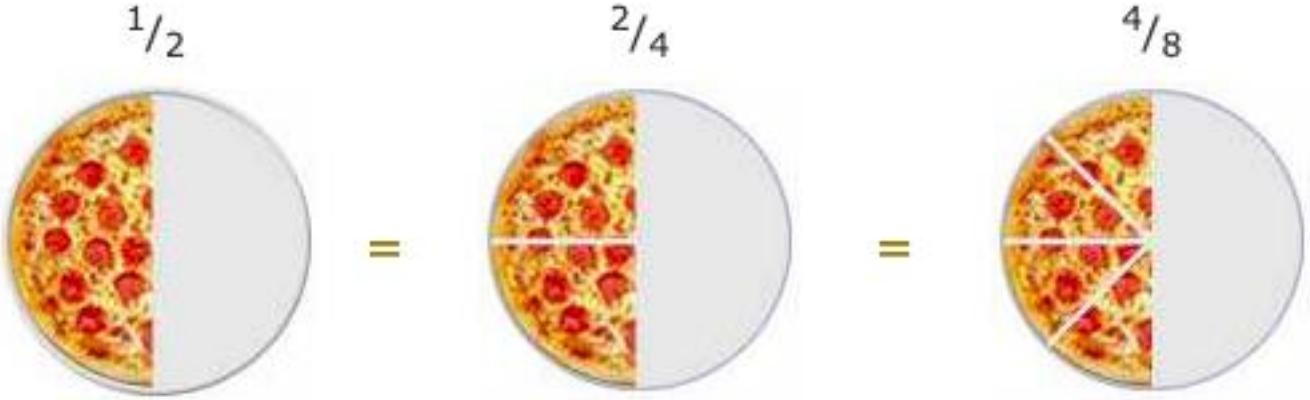


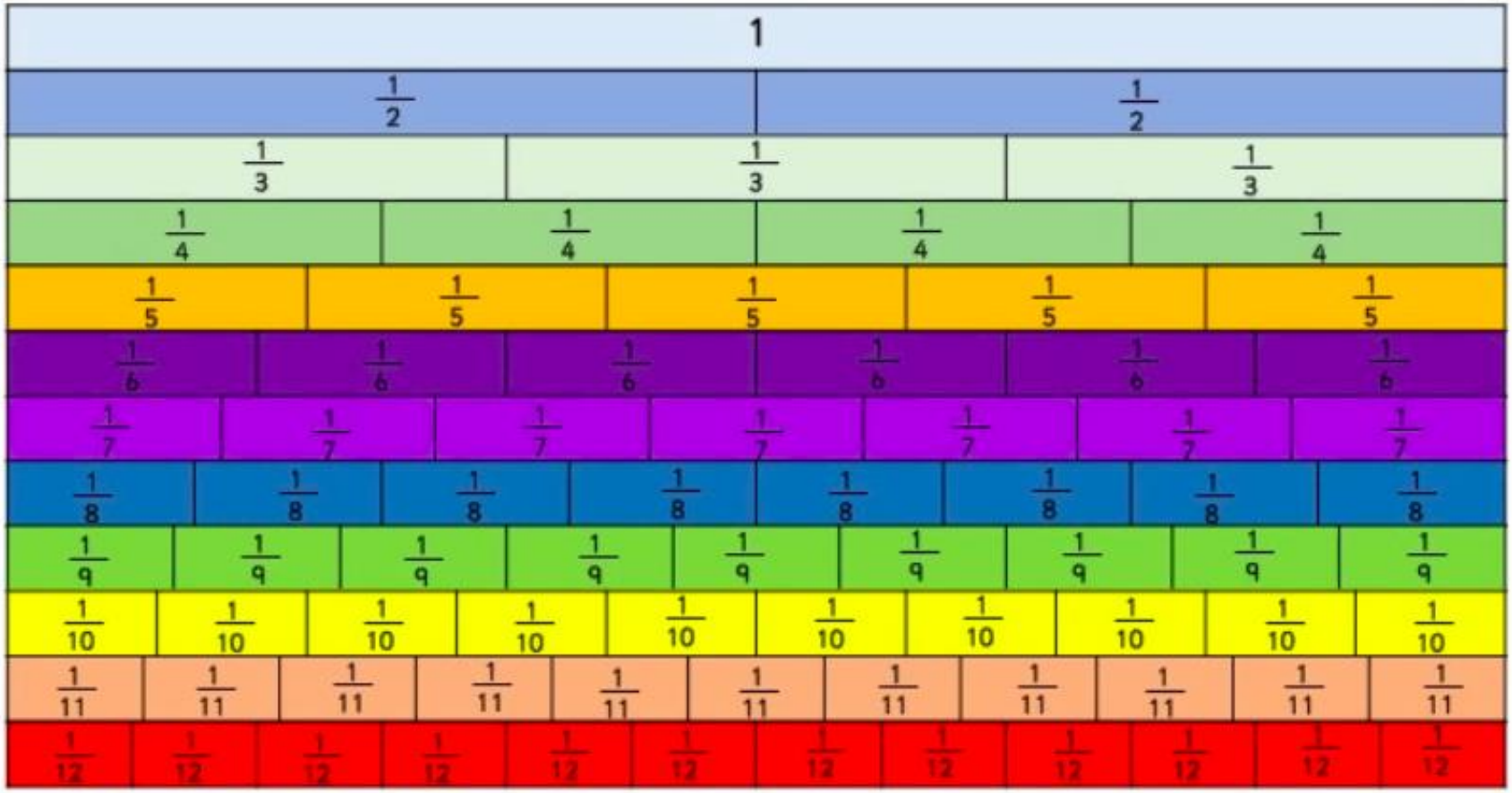
Equivalent Fractions *have the same value, even though they may look different.*

These fractions are really the same:

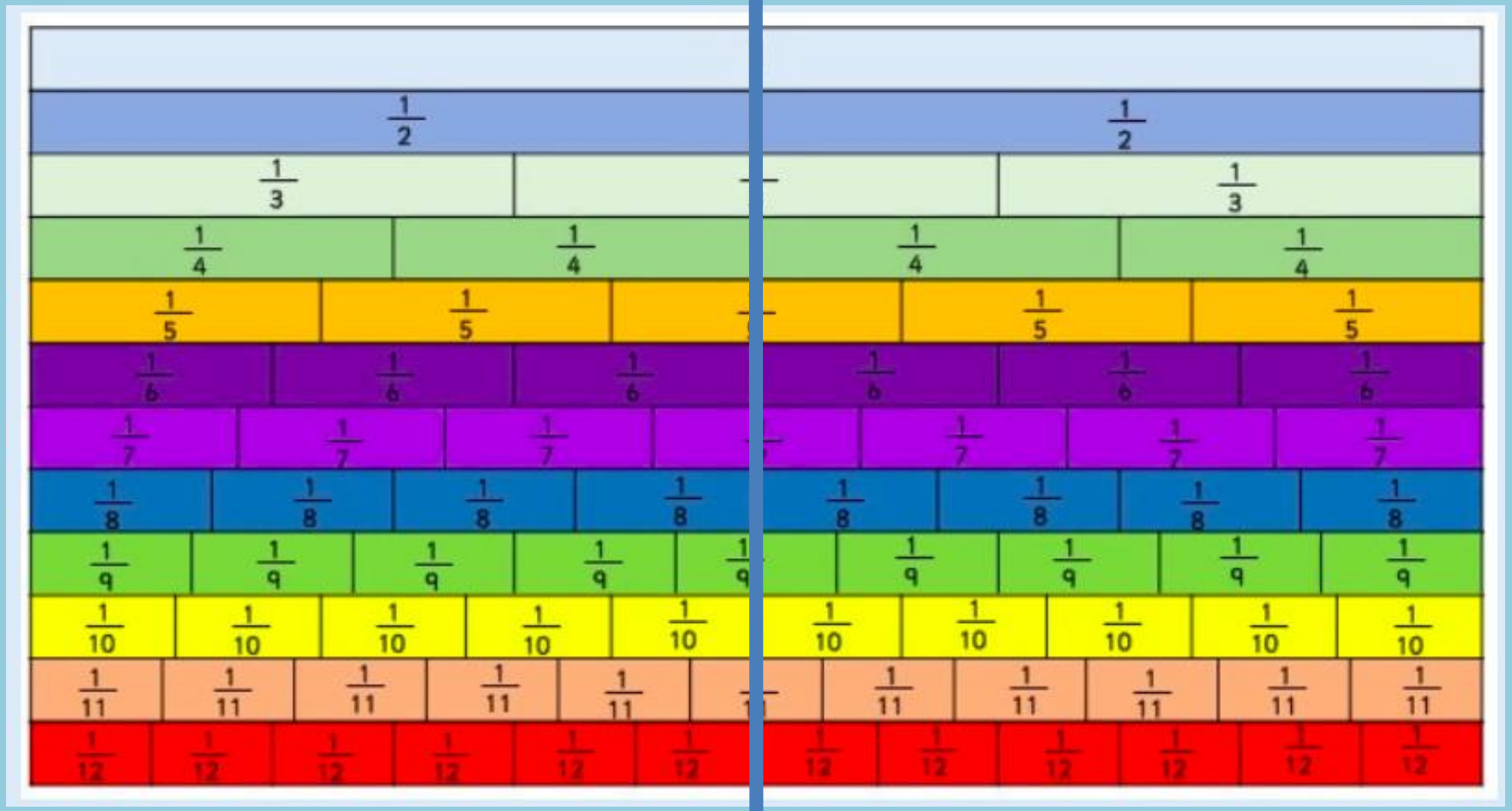
$$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$$

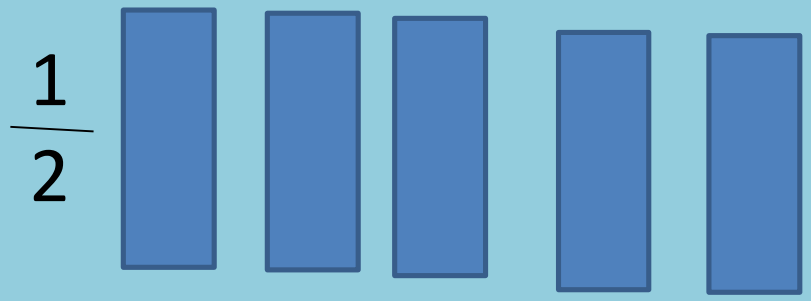
And visually it looks like this:



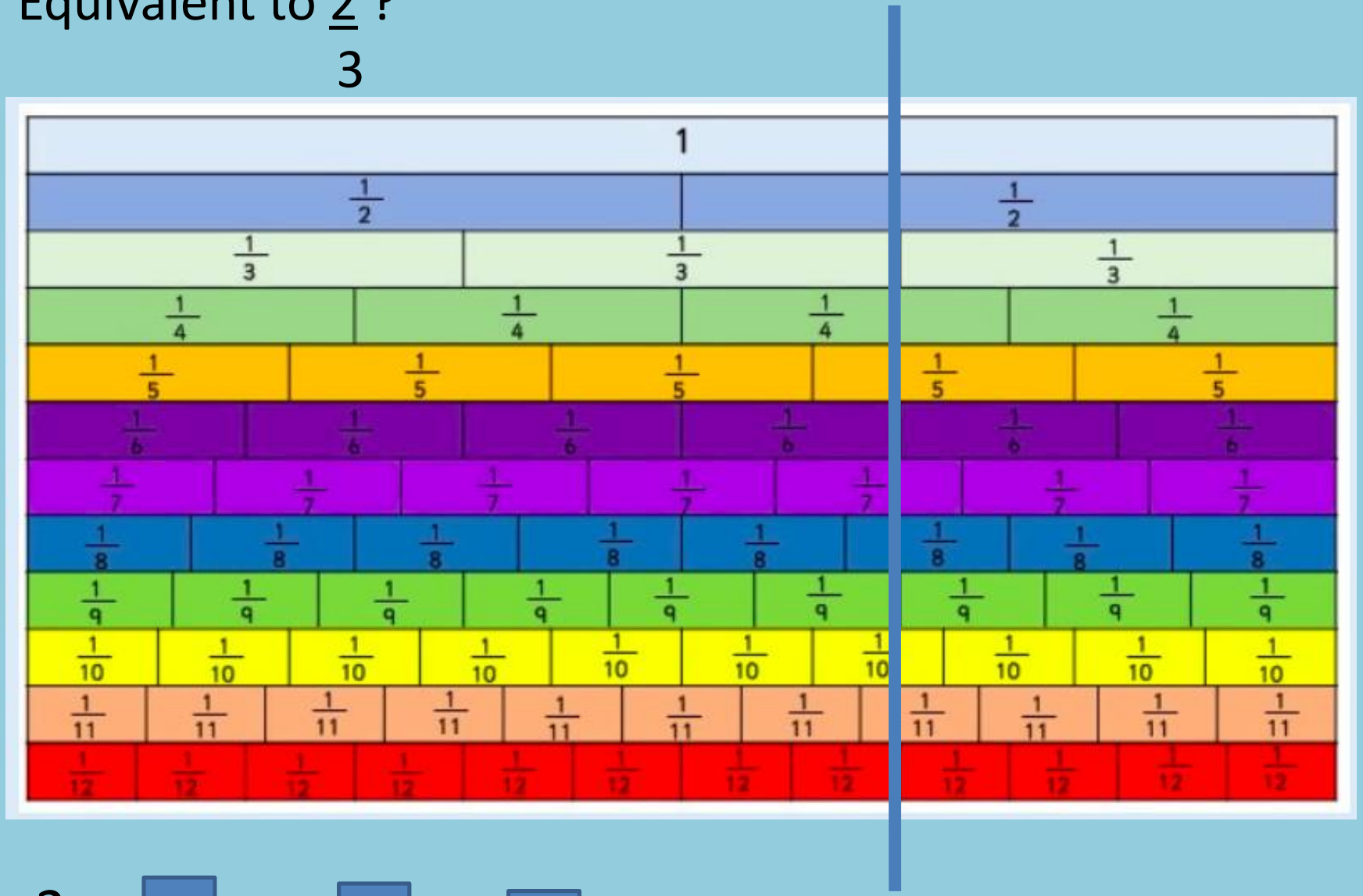

1
1/2 1/2
1/3 1/3 1/3
1/4 1/4 1/4 1/4
1/5 1/5 1/5 1/5 1/5
1/6 1/6 1/6 1/6 1/6 1/6
1/7 1/7 1/7 1/7 1/7 1/7 1/7
1/8 1/8 1/8 1/8 1/8 1/8 1/8 1/8
1/9 1/9 1/9 1/9 1/9 1/9 1/9 1/9 1/9
1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10
1/11 1/11 1/11 1/11 1/11 1/11 1/11 1/11 1/11 1/11 1/11
1/12 1/12 1/12 1/12 1/12 1/12 1/12 1/12 1/12 1/12 1/12 1/12

Equivalent to ½?

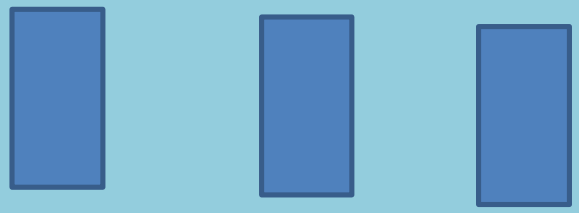


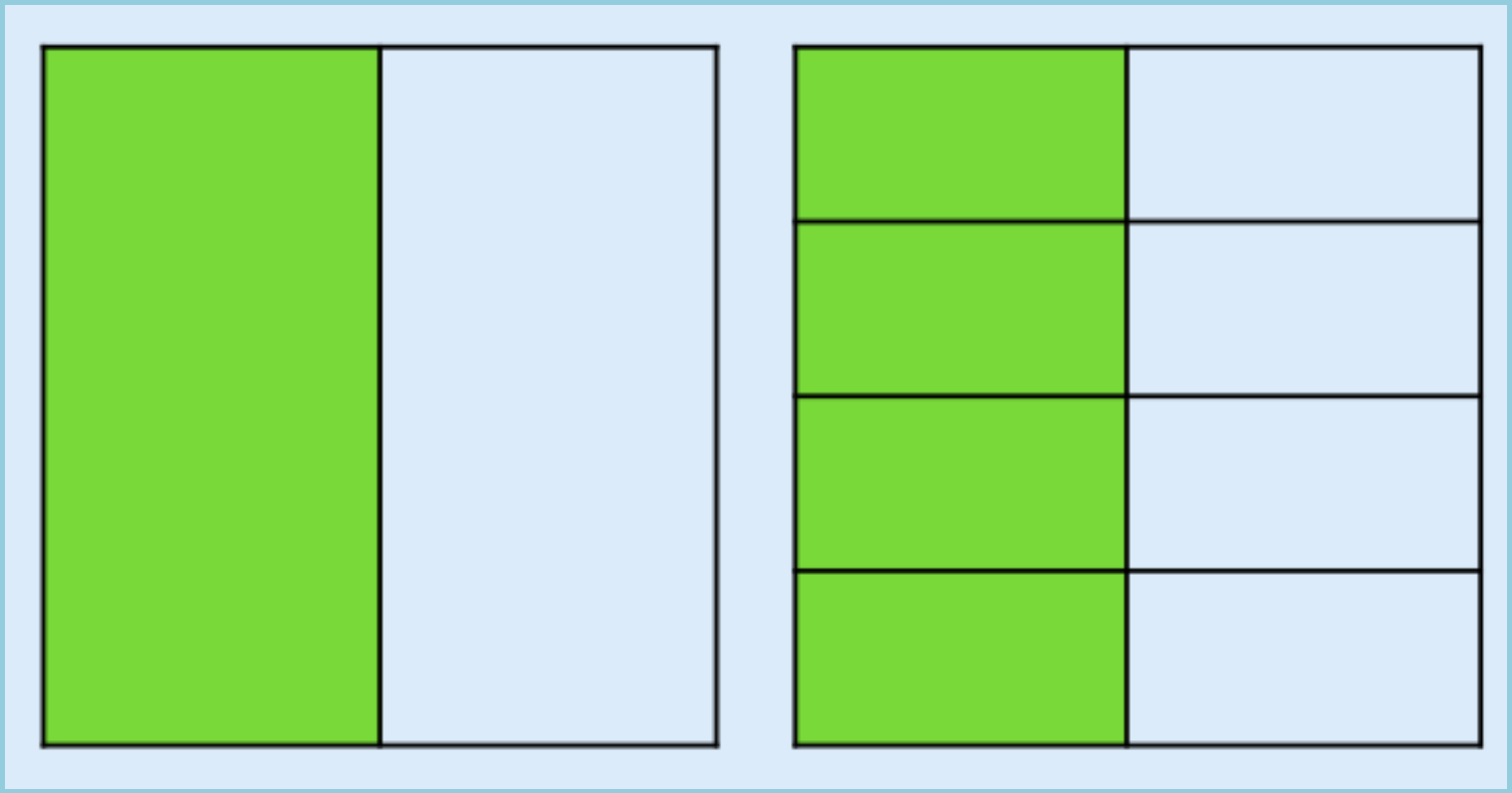


Equivalent to $\frac{2}{3}$?

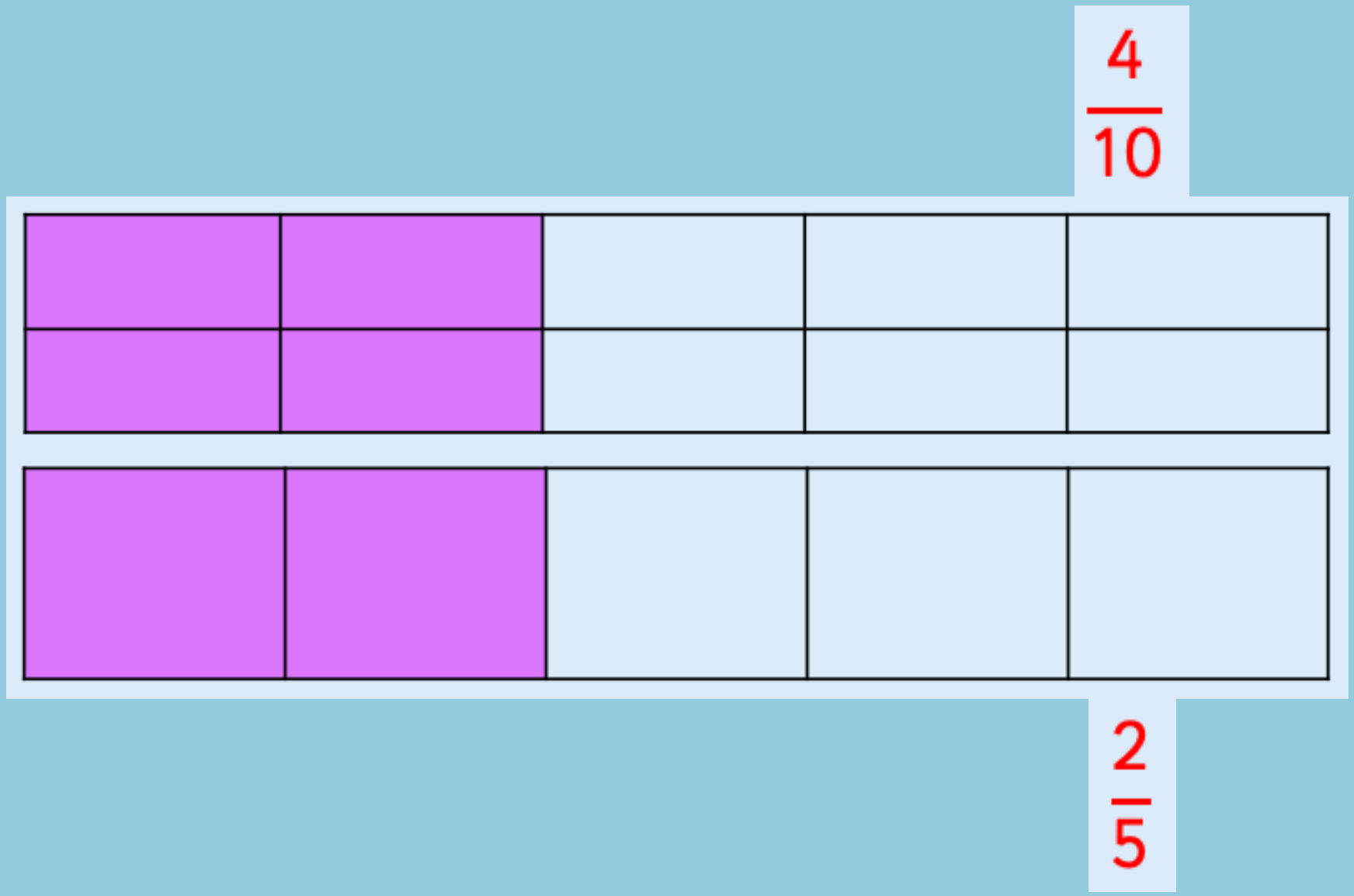


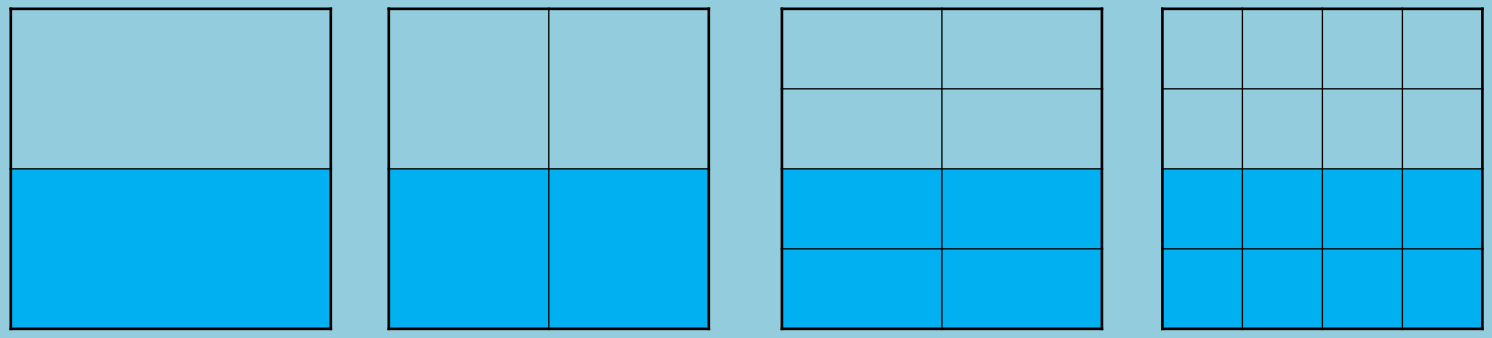
$\frac{2}{3}$





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


4/10
2/5

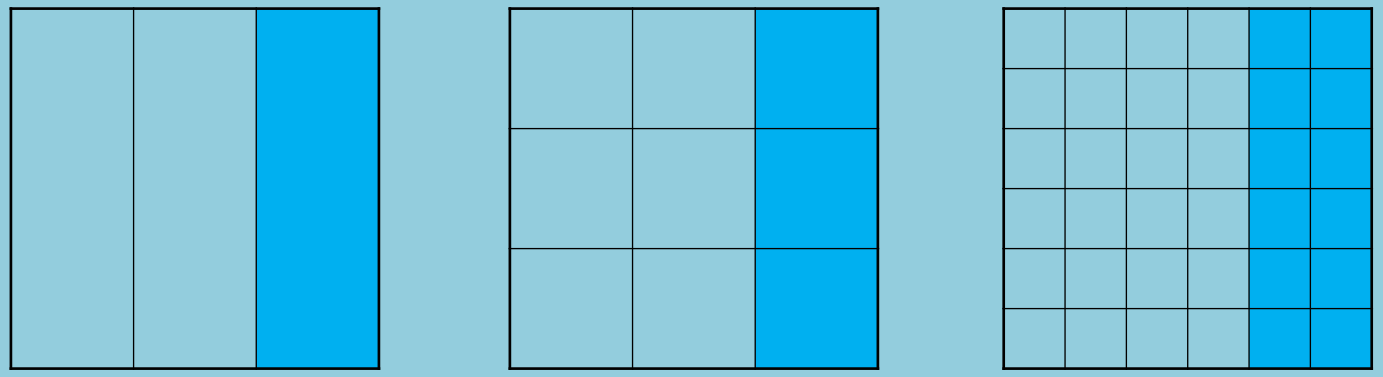


How many equal sections is each square cut into?	**2**	**4**	**8**	**16**
How many of the sections are blue?	**1**	**2**	**4**	**8**
What fraction of each square is blue?	$\frac{1}{2}$	$\frac{2}{4}$	$\frac{4}{8}$	$\frac{8}{16}$

x2 **x2** **x2**

Are these fractions equal?

How do you get from one fraction to the next?



How many equal sections is each square cut into?	**3**	**9**	**36**
How many of the sections are blue?	**1**	**3**	**12**
What fraction of each square is blue?	$\frac{1}{3}$	$\frac{3}{9}$	$\frac{12}{36}$

x3 **x4**

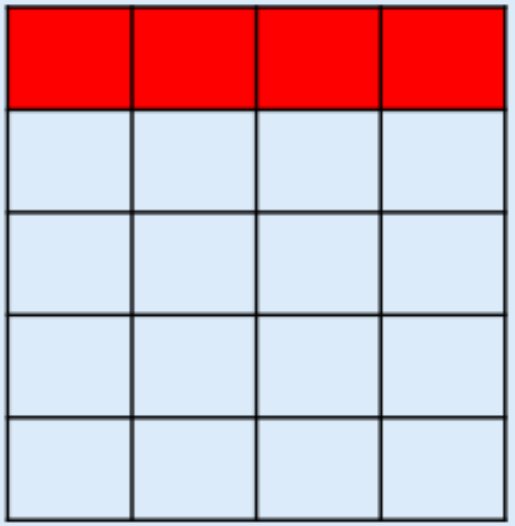
Are these fractions equal?

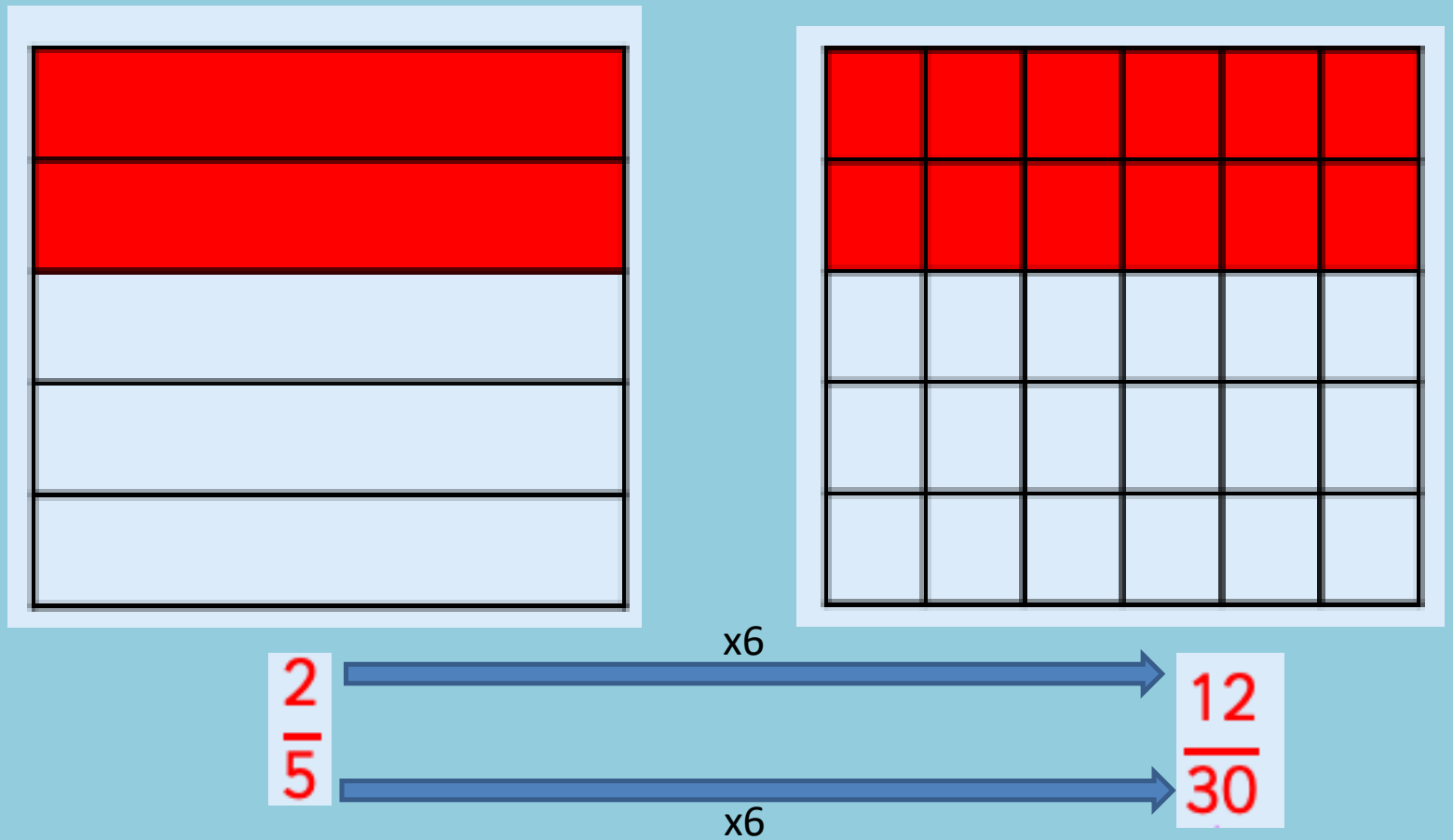
How do you get from one fraction to the next?

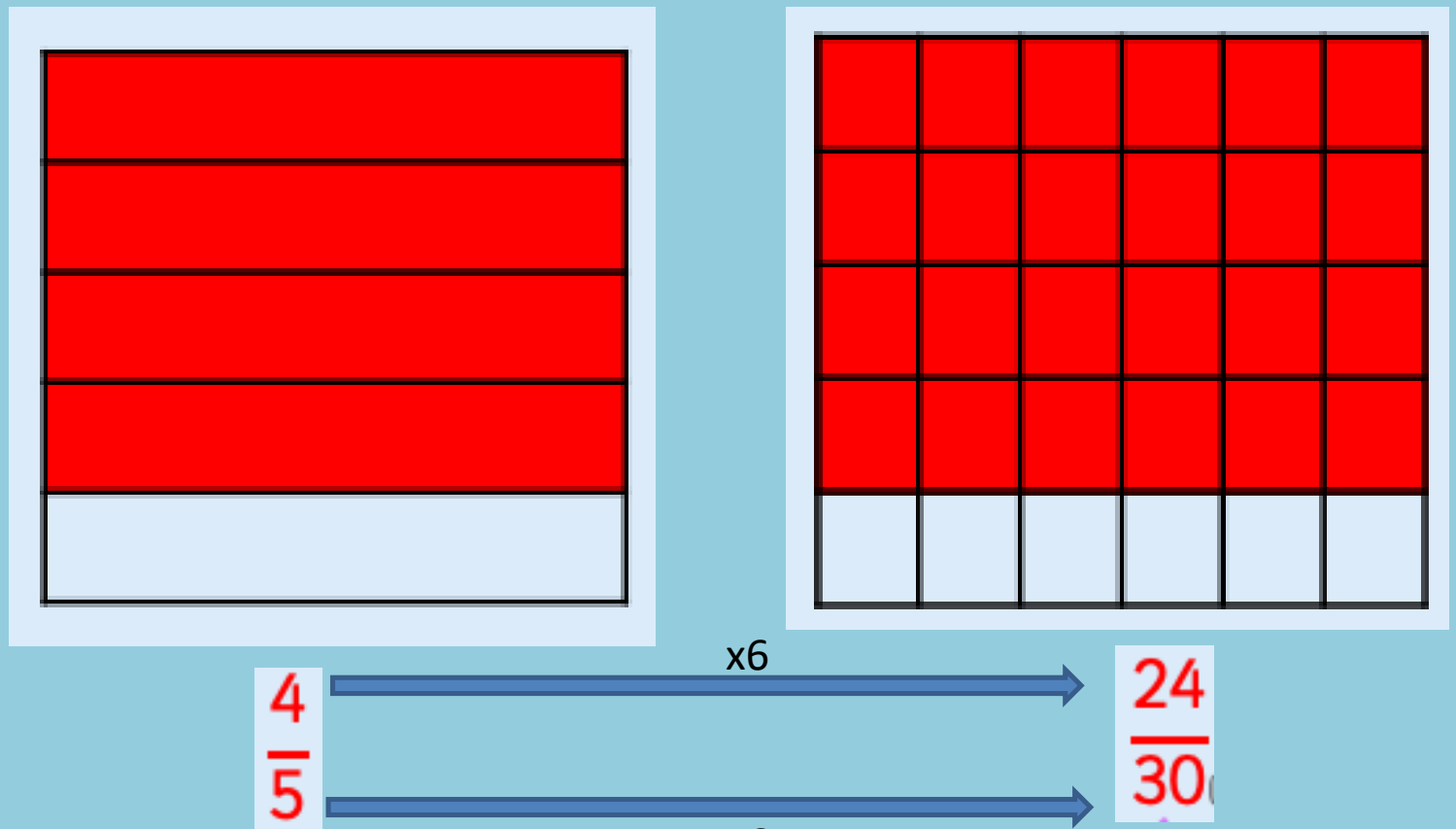
$$\frac{1}{5} = \frac{4}{20}$$

X 4

X 4




x6
2/5
12/30
x6


x6
4/5
24/30
x6

So to find equivalent fractions you multiply the numerator (the top number) and the denominator (the bottom number) by the same number.

E.g. Find 3 equivalent fractions to $\frac{2}{5}$:

$\frac{2}{5} = \frac{4}{10}$ x2

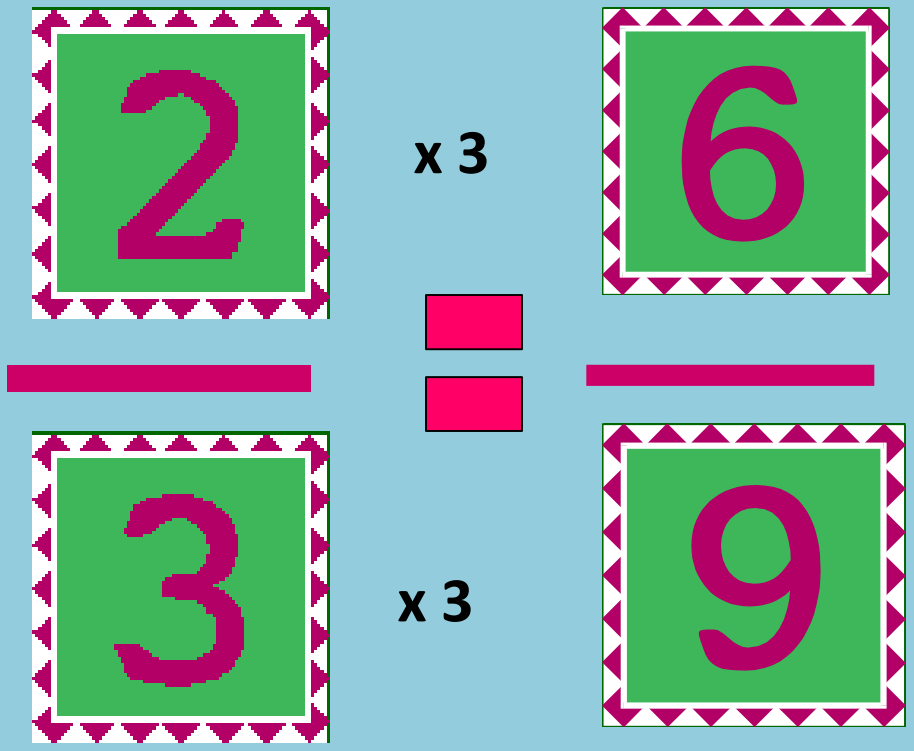
$\frac{2}{5} = \frac{12}{30}$ x6

$\frac{2}{5} = \frac{48}{120}$ x24

Remember you can multiply by any number!!!

Make An Equivalent Fraction

Find the Missing Numerator!



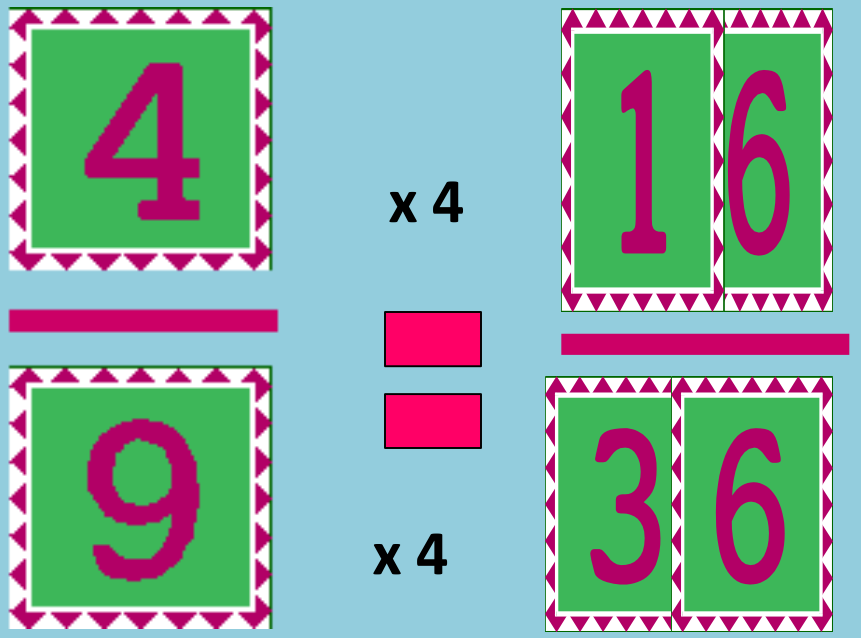
Given the new denominator, can you find the missing numerator?

We multiplied the numerator and denominator by ...

3

Make An Equivalent Fraction

Find the Missing Numerator!



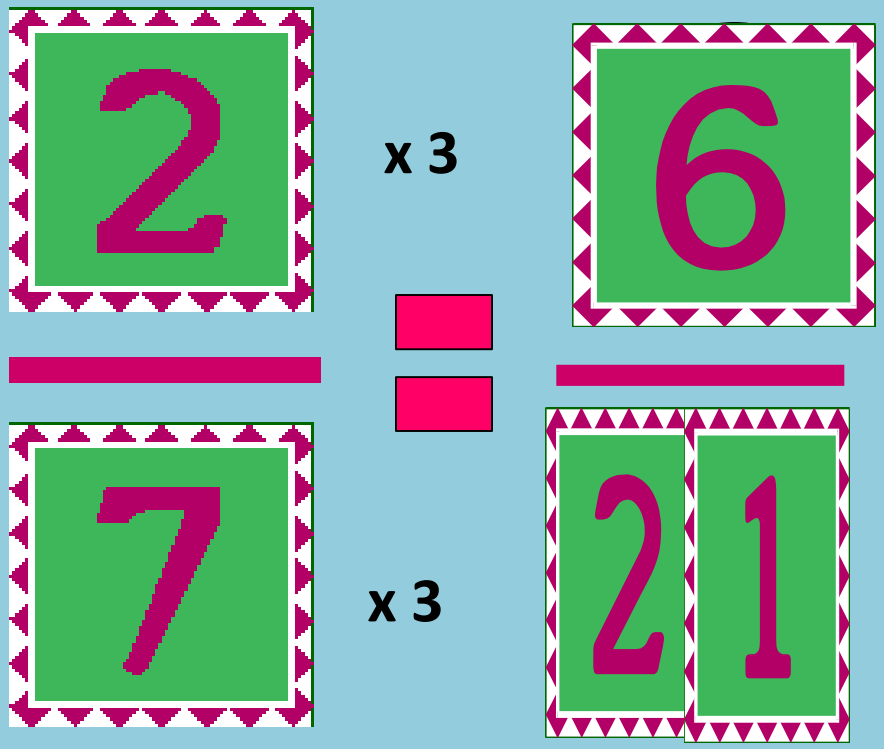
Given the new denominator, can you find the missing numerator?

We multiplied the numerator and denominator by ...

4

Make An Equivalent Fraction

Find the Missing Numerator!



Given the new denominator, can you find the missing numerator?

We multiplied the numerator and denominator by ...

3

Equivalent or not?

$\frac{2}{3}$

$\frac{6}{8}$

Equivalent or not?

$\frac{3}{4}$

$\frac{6}{8}$

Equivalent or not?

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

$$\frac{5}{15}$$

Equivalent or not?

$$\frac{8}{10}$$

$$\frac{24}{30}$$

Equivalent or not?

$\frac{2}{10}$

$\frac{10}{40}$

Equivalent or not?

$\frac{5}{20}$

$\frac{30}{100}$