

25.11.24

LO: TO find fractions equivalent to a unit fraction

To understand that a fraction is part of a whole

To know that different fractions can represent the same amount

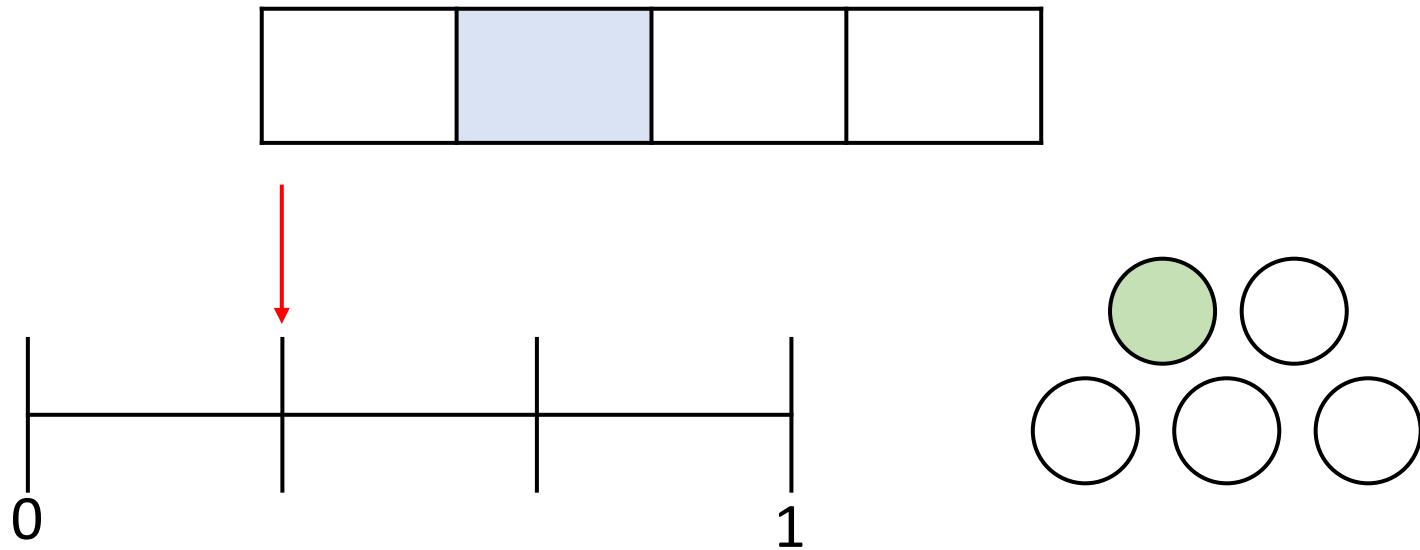
To know that we need to multiply the numerator and denominator to equivalents



Get ready

Here is your starter.

1) What fractions are represented?



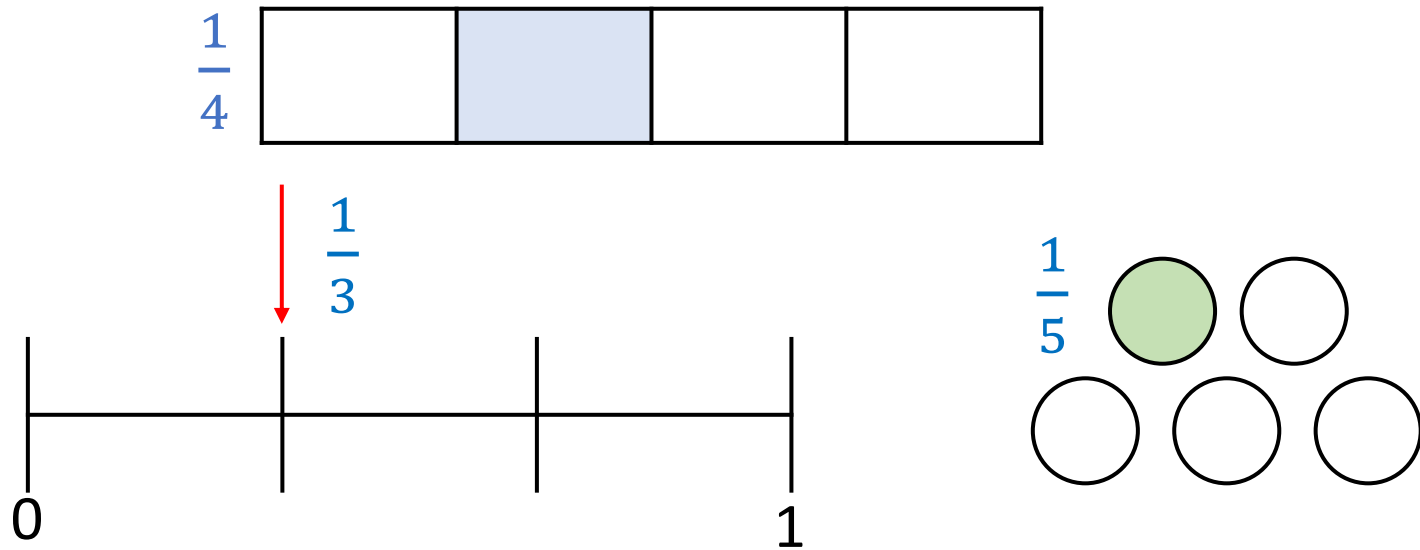
2) $8 \times 3 = \underline{\quad}$

$\underline{\quad} \times 8 = 96$

$8 \times \underline{\quad} = 48$

$8 \times \underline{\quad} = 64$

1) What fractions are represented?



2) $8 \times 3 = \underline{24}$

$\underline{12} \times 8 = 96$

$8 \times \underline{6} = 48$

$8 \times \underline{8} = 64$



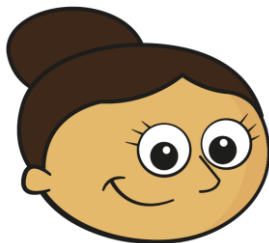
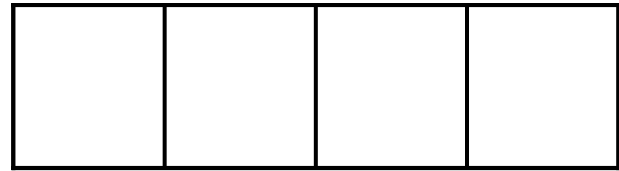
Let's learn

Get ready for today's
new learning.

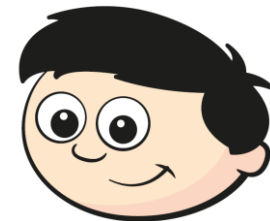
Dora and Dexter each have a strip of paper.

They each fold their paper in half.

Dexter then folds his in half again.



Dora

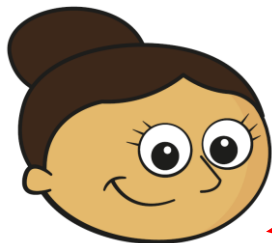
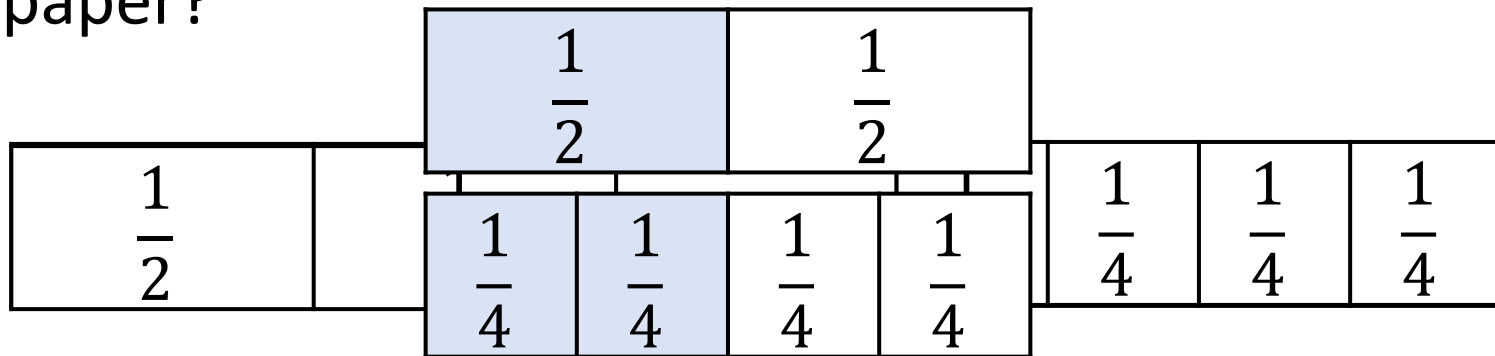


Dexter

Have a think

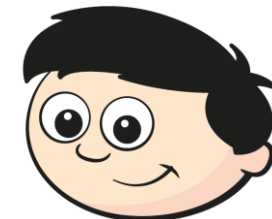


What do you notice?
What fractions can you see on their strips of paper?



Dora

$\frac{1}{2}$ is equivalent to $\frac{2}{4}$

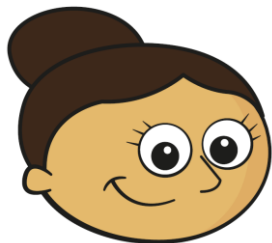
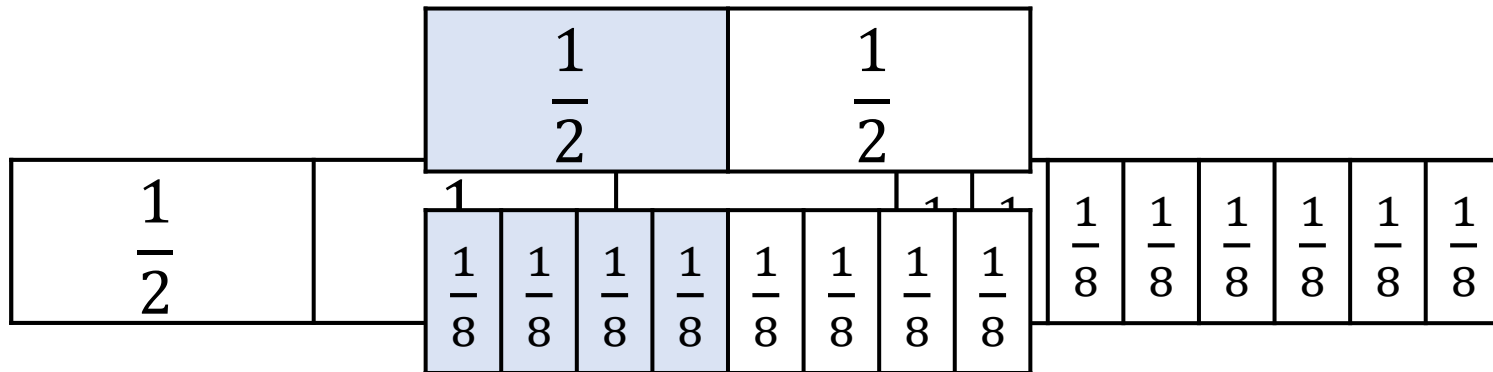


Dexter

Have a think

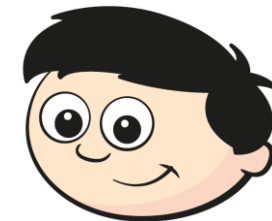


Dexter folds his paper in half again.



Dora

$\frac{1}{2}$ is equivalent to $\frac{4}{8}$

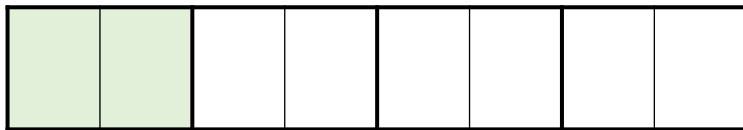


Dexter

What equivalent fractions can you see from these strips of paper?

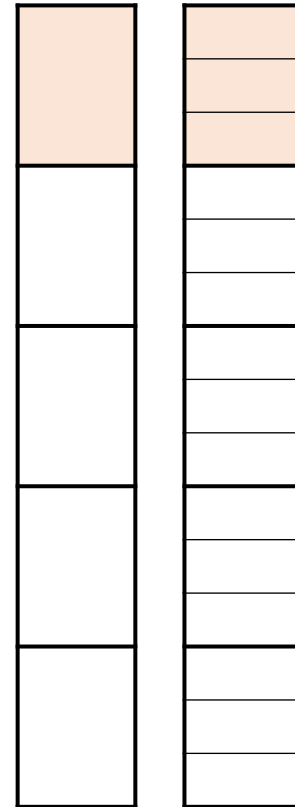


$$\frac{1}{3} = \frac{2}{6}$$

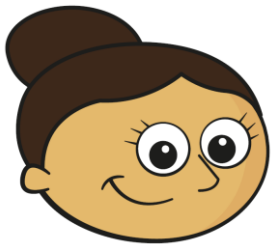
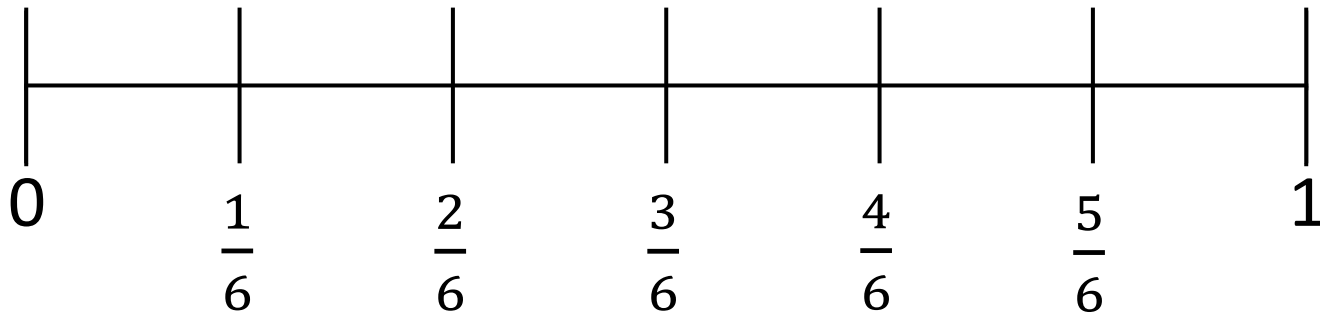
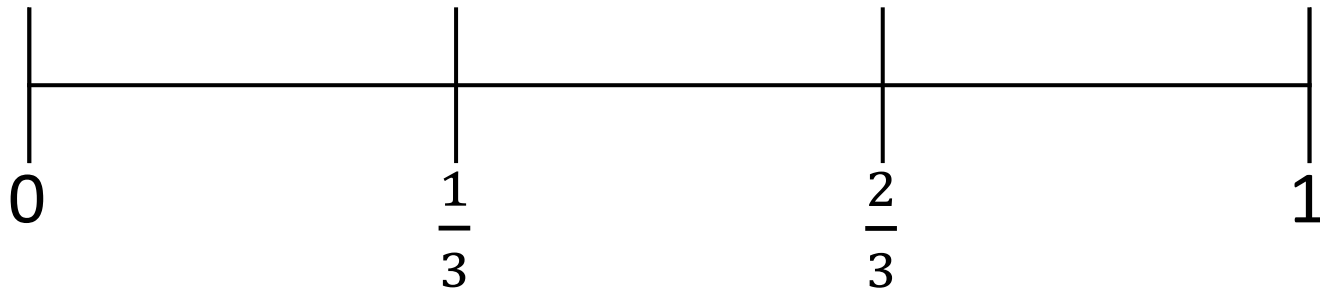


$$\frac{1}{4} = \frac{2}{8}$$

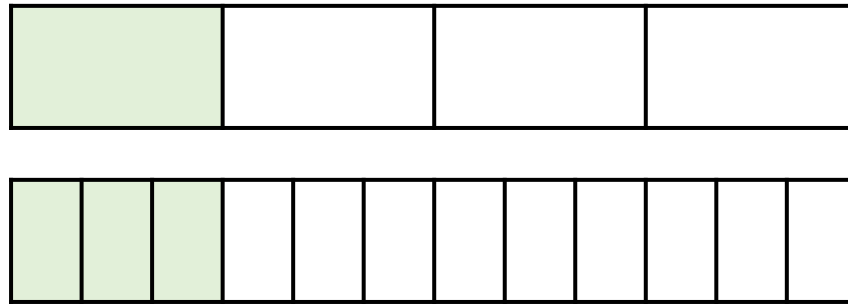
Have a think



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

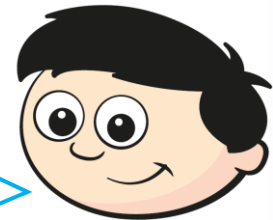


You can also show equivalent fractions on a number line. I can see that $\frac{2}{3}$ is equivalent to $\frac{4}{6}$.



$$\begin{array}{c} \times 3 \\ \frac{1}{4} = \frac{3}{12} \\ \times 3 \end{array}$$

I notice that with equivalent fractions, you multiply the numerator and the denominator by the same amount.

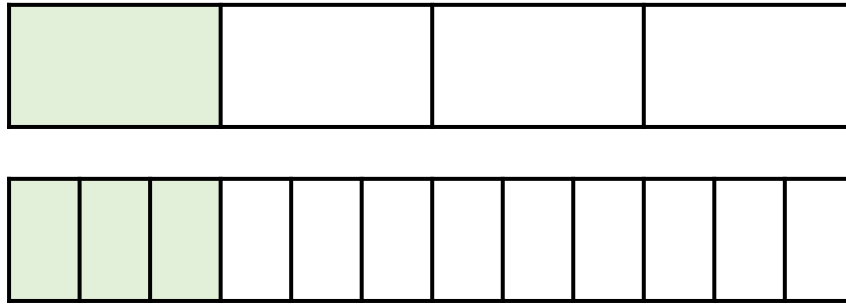


Have a think



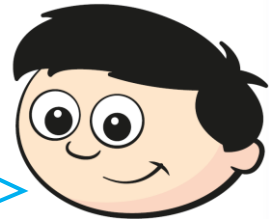
$$\begin{array}{ccc} & \times 4 & \\ \frac{1}{5} & = & \frac{4}{20} \\ & \times 4 & \end{array}$$

The numerator has been multiplied by 4, so if the denominator is multiplied by 4, then the fractions will be equivalent.



$$\times 4 \quad \left(\frac{1}{4} \right) = \left(\frac{3}{12} \right) \quad \times 4$$

I notice two fractions are equivalent if both numerators multiply by the same number to make the denominators.



$$\times 5 \quad \left(\frac{1}{5} \right) = \left(\frac{5}{25} \right) \quad \times 5$$

The denominator is 5 times the numerator in both fractions, so the fractions are equivalent .

Are the fractions equivalent?

$$\frac{1}{6} \stackrel{\times 3}{=} \frac{3}{18} = \frac{2}{12} \stackrel{\times 6}{=}$$

$\times 6$ $\times 3$ $\times 6$

The diagram illustrates the equivalence of three fractions: $\frac{1}{6}$, $\frac{3}{18}$, and $\frac{2}{12}$. Blue arrows show the transformations: $\frac{1}{6} \times 3 = \frac{3}{18}$ (top arrow), $\frac{1}{6} \times 6 = \frac{2}{12}$ (left arrow), and $\frac{2}{12} \times 6 = \frac{12}{72}$ (right arrow). A green checkmark is placed below $\frac{3}{18}$ and another below $\frac{2}{12}$.

What are the missing numbers?

Have a think



$$\div 2 \quad \frac{1}{2} = \frac{4}{8} = \frac{5}{10} \quad \div 2$$

The diagram shows the fraction $\frac{1}{2}$ on the left, followed by an equals sign, then $\frac{4}{8}$, another equals sign, and finally $\frac{5}{10}$. A blue curved arrow points from the left towards $\frac{1}{2}$ with the label $\div 2$. A blue curved arrow points from $\frac{5}{10}$ towards the right with the label $\div 2$. A blue curved arrow points from $\frac{1}{2}$ to $\frac{4}{8}$ with the label $\times 4$ above it. A blue curved arrow points from $\frac{4}{8}$ to $\frac{5}{10}$ with the label $\times 4$ below it.



Your turn

Have a go at the questions
on your worksheet

