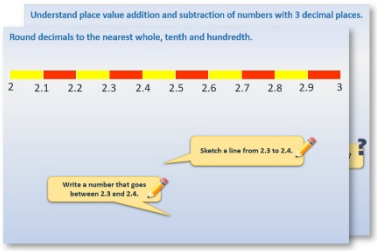
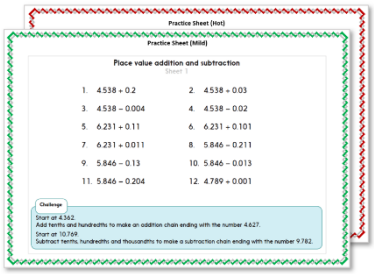
Year 4: Week 3, Day 1
Equivalent fractions

Each day covers one maths topic. It should take you about 1 hour or just a little more.

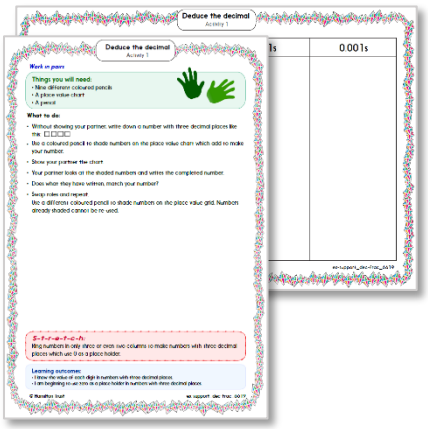
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



2. Tackle the questions on the **Practice Sheet**. There might be a choice of either Mild (easier) or Hot (harder)! Check the answers.



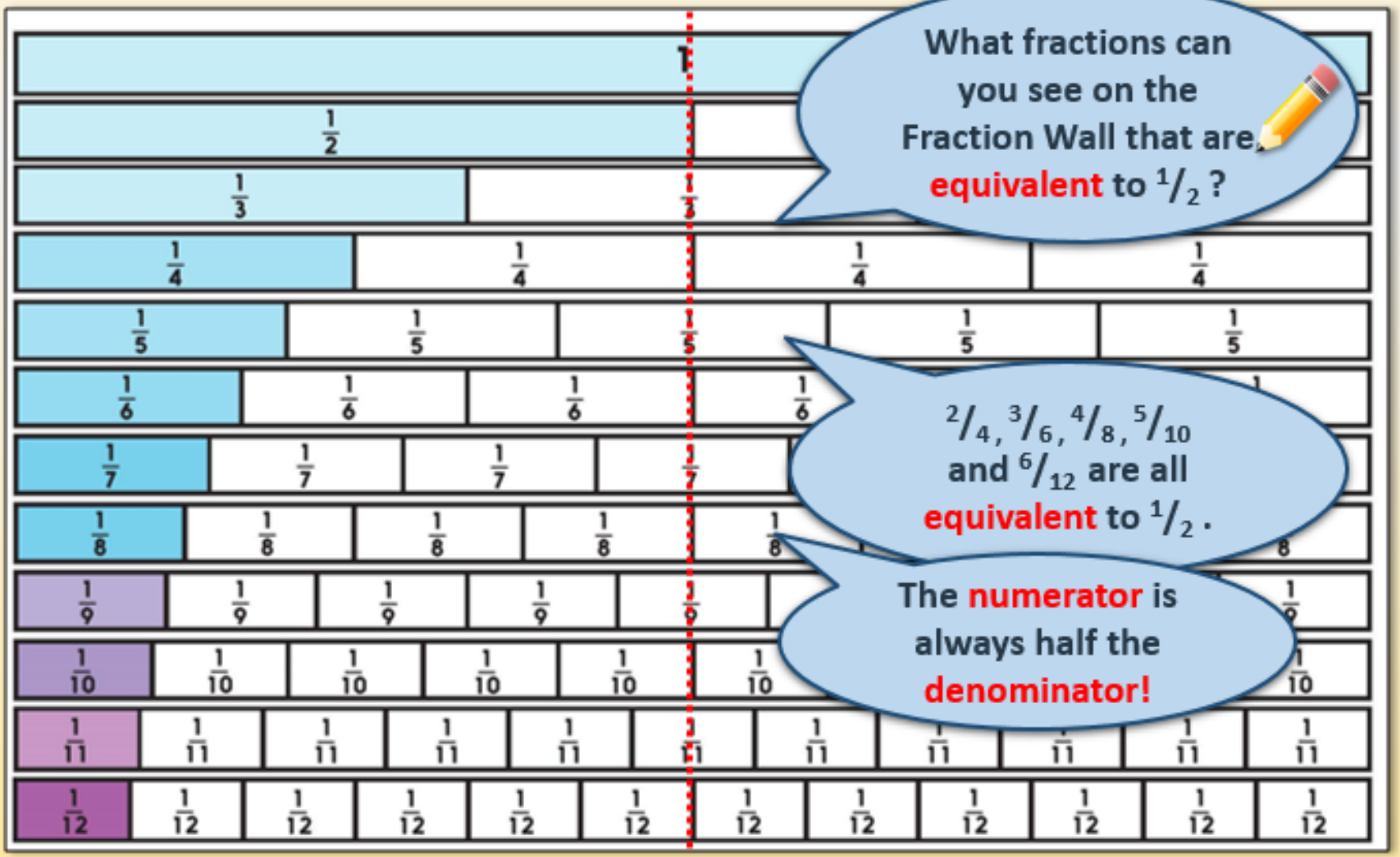
3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**



4. Think you've cracked it? Whizzed through the Practice Sheets? Have a go at the **Investigation**…

Learning Reminders

Identify equivalent fractions.



Learning Reminders

Write fractions in their simplest form.

We can write $^{6}/_{12}$ as $^{1}/_{2}$. This is called writing the fraction in its **simplest form.**

We can find a fraction's **simplest form** by dividing the **numerator** and **denominator** by the same number; in this case 6.

What is the simplest equivalent fraction to $^{2}/_{6}$? **What can you divide both 2 and 6 by?**

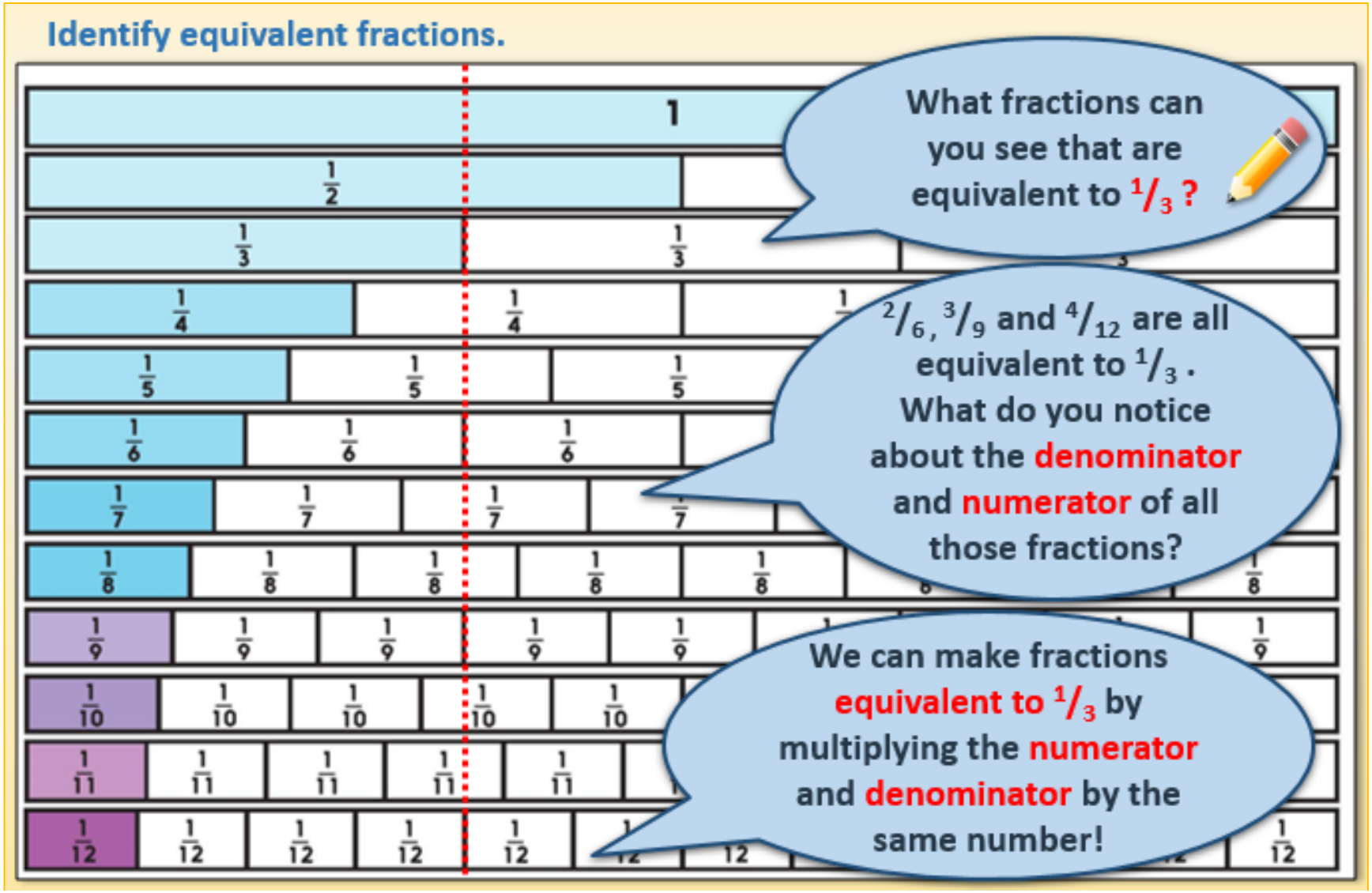
$^{2}/_{6} \equiv {}^{1}/_{3}$ You can check on the Fraction Wall!

What is the simplest equivalent fraction to $^{6}/_{8}$? **What can you divide both 6 and 8 by?**

$^{6}/_{8} \equiv {}^{3}/_{4}$ Divide both the numerator and denominator by 2.

Learning Reminders

Identify equivalent fractions.



Practice Sheet Mild

Fractions practice

Draw a circle round all the fractions which are equivalent to $\frac{1}{2}$.
Draw a square round all the fractions which are equivalent to $\frac{1}{4}$.

$\frac{2}{4}$ $\frac{3}{4}$ $\frac{6}{12}$ $\frac{5}{20}$

$\frac{20}{40}$ $\frac{2}{8}$ $\frac{4}{10}$ $\frac{3}{12}$

$\frac{2}{6}$ $\frac{8}{12}$ $\frac{2}{5}$ $\frac{3}{6}$

$\frac{9}{18}$ $\frac{10}{40}$ $\frac{4}{8}$

$\frac{2}{3}$ $\frac{10}{20}$ $\frac{8}{16}$ $\frac{5}{10}$ $\frac{4}{16}$

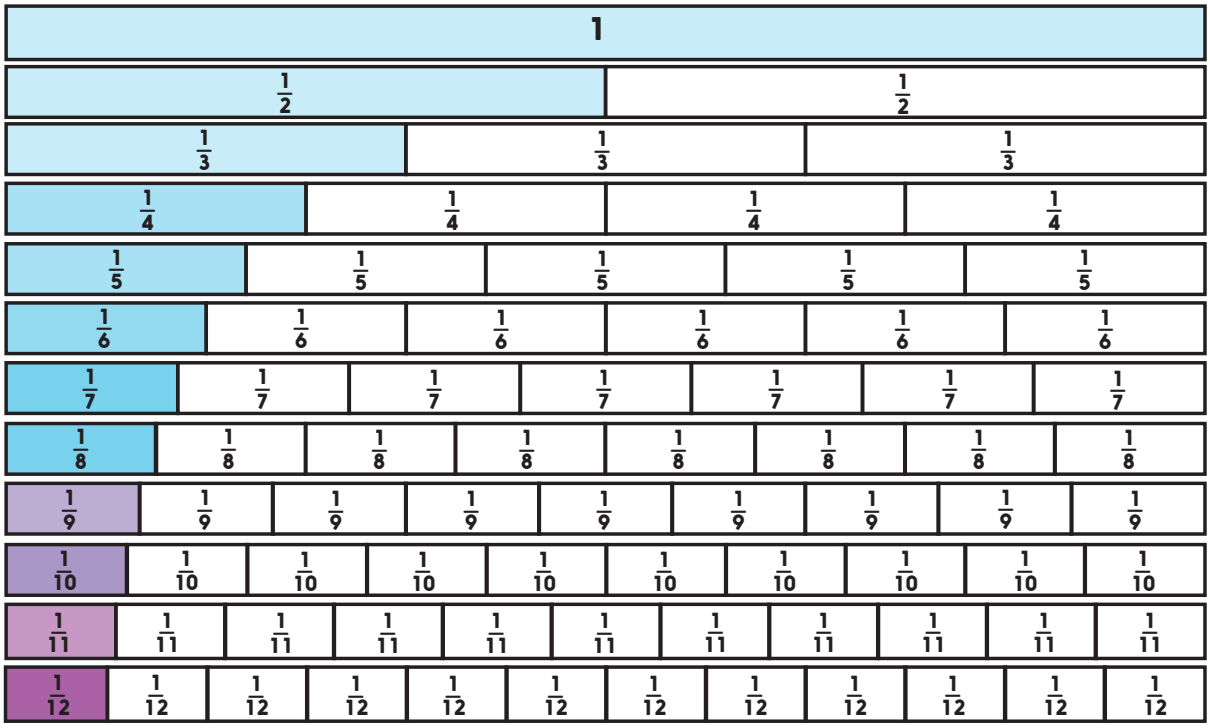
Challenge

Write at least two more fractions equivalent to $\frac{1}{2}$ and two more equivalent to $\frac{1}{4}$.

Practice Sheet Hot

Fractions practice

Use the fraction wall to help you to write pairs of equivalent fractions.



$\frac{2}{8} \equiv \frac{1}{\square}$ $\quad \frac{6}{8} \equiv \frac{\square}{4}$ $\quad \frac{3}{9} \equiv \frac{1}{\square}$ $\quad \frac{6}{9} \equiv \frac{\square}{3}$

$\frac{2}{12} \equiv \frac{1}{\square}$ $\quad \frac{3}{12} \equiv \frac{1}{\square}$ $\quad \frac{4}{12} \equiv \frac{1}{\square}$ $\quad \frac{6}{12} \equiv \frac{1}{\square}$

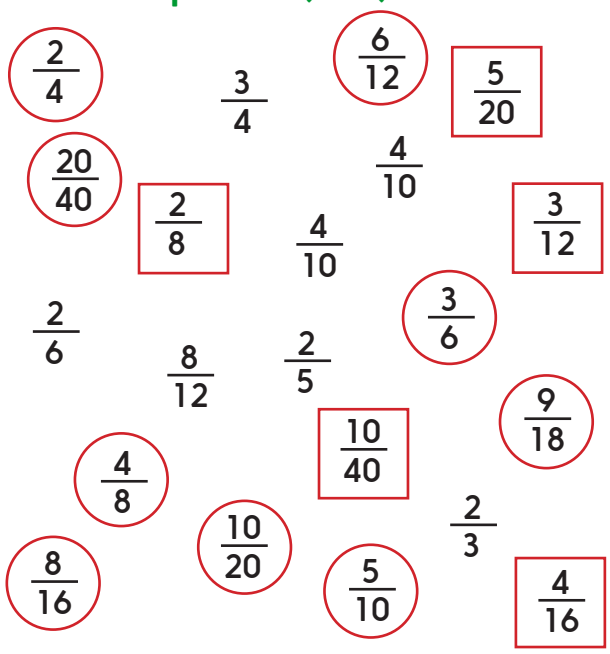
$\frac{4}{12} \equiv \frac{\square}{6}$ $\quad \frac{10}{12} \equiv \frac{\square}{6}$ $\quad \frac{8}{12} \equiv \frac{\square}{3}$ $\quad \frac{9}{12} \equiv \frac{\square}{4}$

Challenge

How many more rows would we need to draw on the fraction wall to complete this pair of equivalent fractions: $\frac{5}{7} \equiv \frac{10}{\square}$?

Practice Sheet Answers

Fractions practice (Mild)



Challenge

Other fractions equivalent to $\frac{1}{2}$ are $\frac{6}{12}$, $\frac{7}{14}$, $\frac{8}{16}$, $\frac{11}{22}$, etc.

Other fractions equivalent to $\frac{1}{4}$ are $\frac{6}{24}$, $\frac{7}{28}$, $\frac{8}{32}$, $\frac{9}{36}$, etc.

Fractions practice (Hot)

$\frac{2}{8} \equiv \frac{1}{4}$ $\quad \frac{6}{8} \equiv \frac{3}{4}$ $\quad \frac{3}{9} \equiv \frac{1}{3}$ $\quad \frac{6}{9} \equiv \frac{2}{3}$

$\frac{2}{12} \equiv \frac{1}{6}$ $\quad \frac{3}{12} \equiv \frac{1}{4}$ $\quad \frac{4}{12} \equiv \frac{1}{3}$ $\quad \frac{6}{12} \equiv \frac{1}{2}$

$\frac{4}{12} \equiv \frac{2}{6}$ $\quad \frac{10}{12} \equiv \frac{5}{6}$ $\quad \frac{8}{12} \equiv \frac{2}{3}$ $\quad \frac{9}{12} \equiv \frac{3}{4}$

Challenge

We would need two more rows:

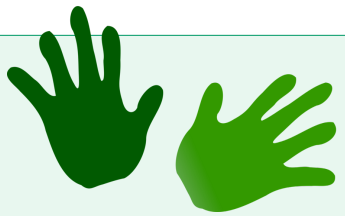
$\frac{1}{13}$s and $\frac{1}{14}$s to give $\frac{5}{7} \equiv \frac{10}{14}$

A Bit Stuck?
The Half family

Work in pairs

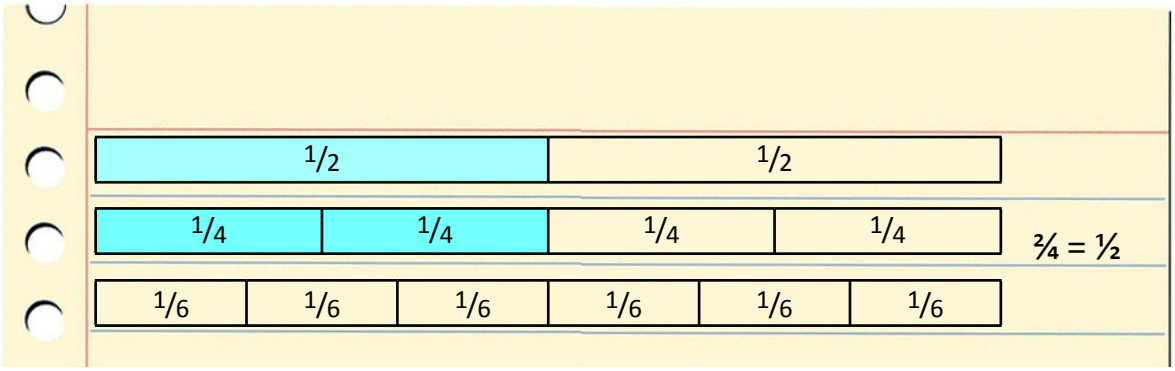
Things you will need:

- A pencil
- A fraction wall
- Coloured pencil
- Scissors
- Glue sticks



What to do:

- Colour in ½ of the strip divided into halves.
- Cut the fraction wall into strips.
- Lay each strip one at a time next to the strip of halves until you find a number of fractions which are the same size as ½. Colour in half of this strip.
- Repeat for each strip until you have found all the fractions which are equivalent (same size) to ½.
- Stick these fractions under one another.
- Write the pairs of equivalent fractions.



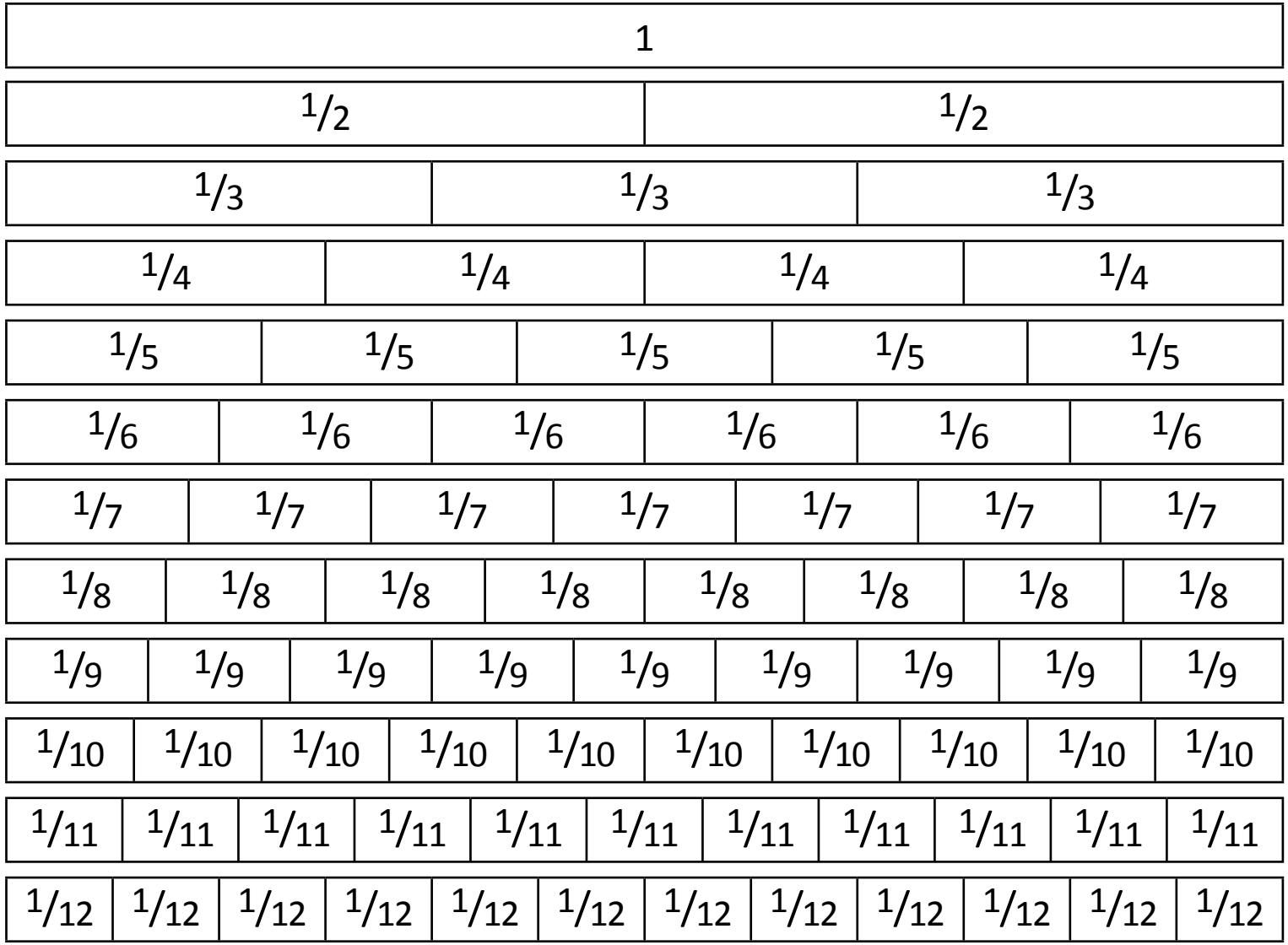
S-t-r-e-t-c-h:

Cut another fraction wall into strips. Colour in one quarter of the strips of quarters. Look for fractions equivalent to ¼, stick under strips of quarters and write the pairs of equivalent fractions.

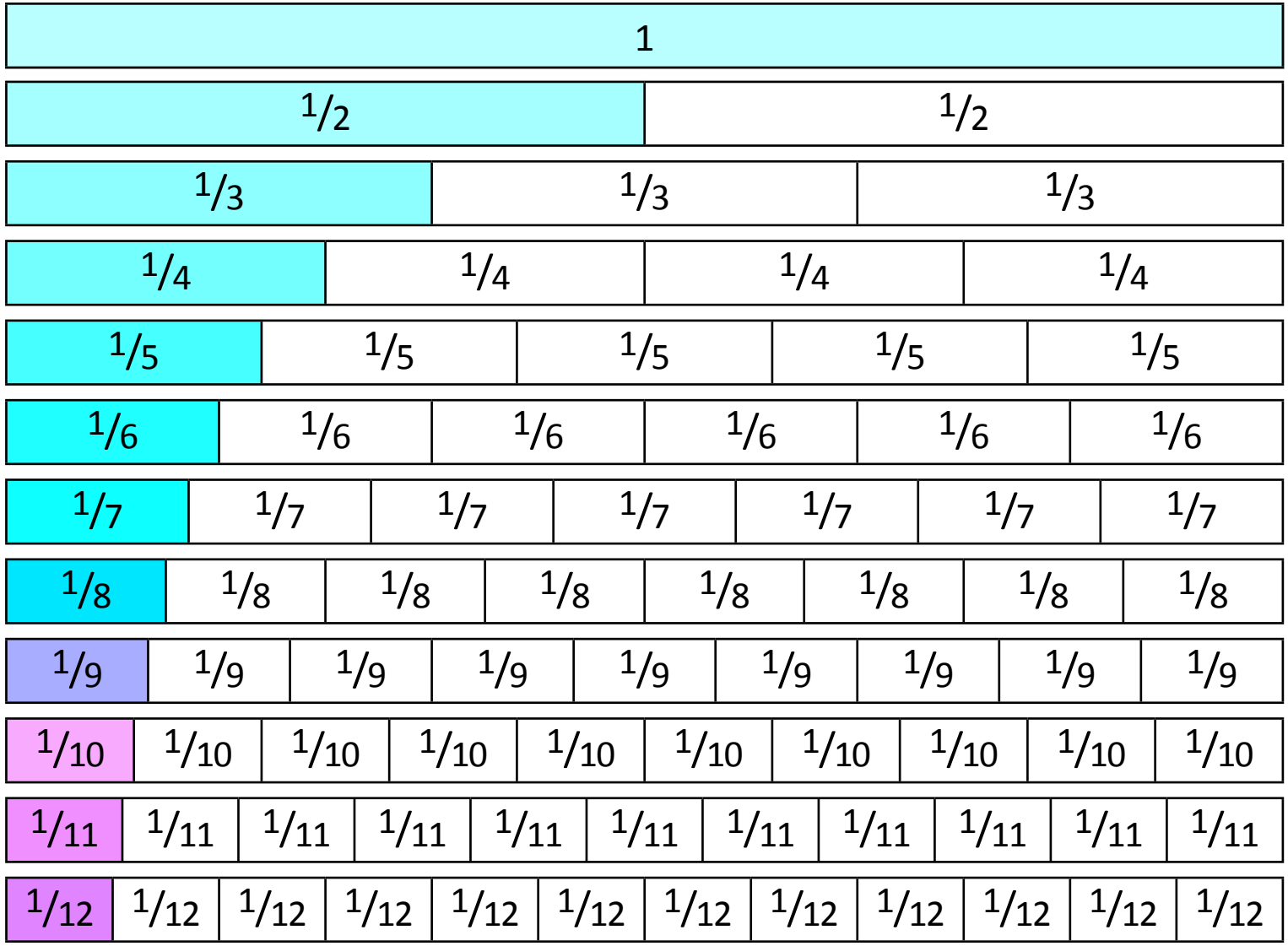
Learning outcomes:

- I can find fractions which are equivalent to ½.
- I am beginning to find fractions which are equivalent to ¼.

A Bit Stuck?
The Half family



A Bit Stuck?
The Half family



Investigation

Best score for me!

1. Use this line of fraction cards.

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

2. Choose a fraction, e.g. $\frac{3}{4}$
3. Look at the first square below.
4. Identify two numbers, which, one over the other, make an equivalent fraction to the one chosen, e.g. $\frac{9}{12}$
5. Write the equivalent fraction below the appropriate fraction card.
6. Cross out these two numbers on the first square.
7. Choose another fraction, and repeat, e.g. choose $\frac{1}{5}$, write $\frac{4}{20}$ and cross out 4 and 20.
7. Keep going like this. *You cannot use a crossed-out number on your square for a second time!*
8. For how many fraction cards did you manage to write equivalent fractions underneath? A good score is anything over 6, but you are chasing 9 or 10!

What sort of fractions is it best to choose first? Why?
Why is it not sensible to choose $\frac{1}{2}$ first?
Which numbers on the square are never used?

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
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