

RECALL

$$\begin{array}{r} 2 \\ \hline 7 \end{array} + \begin{array}{r} 5 \\ \hline 7 \end{array} = \boxed{}$$

$$\begin{array}{r} 5 \\ \hline 7 \end{array} + \begin{array}{r} 2 \\ \hline 7 \end{array} = \boxed{}$$

Find the answers...
How did you do this?

RECALL

$$\begin{array}{r} \underline{2} \\ 7 \end{array} + \begin{array}{r} \underline{5} \\ 14 \end{array} = \boxed{}$$

$$\begin{array}{r} \underline{5} \\ 7 \end{array} + \begin{array}{r} \underline{2} \\ 6 \end{array} = \boxed{}$$

Find the answers...
How did you do this?

RECALL

$$\begin{array}{r} \underline{2} + \underline{5} = \underline{7} \\ 7 \quad 7 \quad 7 \end{array}$$

$$\begin{array}{r} \underline{2} + \underline{3} = \\ 4 \quad 8 \end{array}$$

x2

$$\begin{array}{r} \underline{4} + \underline{3} = \underline{7} \\ 8 \quad 8 \quad 8 \end{array}$$

$$\begin{array}{r} \underline{2} + \underline{3} = \\ 3 \quad 4 \end{array}$$

x4

x3

$$\begin{array}{r} \underline{8} + \underline{9} = \underline{17} = 1 \underline{5} \\ 12 \quad 12 \quad 12 \quad 12 \end{array}$$

Nothing



Change one



Change both!



L.O. - ADD AND SUBTRACT FRACTIONS WITH DIFFERENT DENOMINATIONS AND MIXED NUMBERS, USING THE CONCEPT OF EQUIVALENT FRACTIONS.

- **SOME WILL EVEN:** Solve problems involving adding and subtracting fractions.
- **SOME WILL:** Be able to identify missing numbers in fraction sums.
- **MOST WILL:** Recognise LCM (lowest common multiples) to convert fractions to same denominator.
- **ALL WILL:** Add and subtract fractions with same denominators.

GUIDED PRACTICE - MY TURN



- a) What fraction of a bale of hay does Hattie eat in a day?
- b) Molly eats one quarter of a bale of hay less than Hattie a day.

What fraction of a bale of hay does Molly eat in a day?

help

Draw a bar model to help you and don't forget about 'common denominator'.



How much hay do the horses eat together in a day?

GUIDED PRACTICE - OUR TURN



a) What fraction of a bale of hay does Hattie eat in a day?

b) Molly eats one quarter of a bale of hay less than Hattie a day.

What fraction of a bale of hay does Molly eat in a day?

help

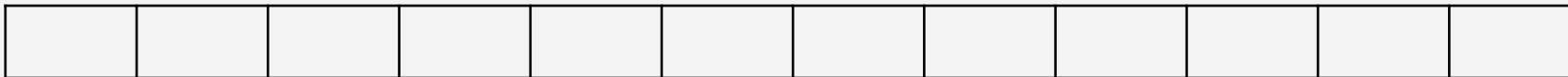
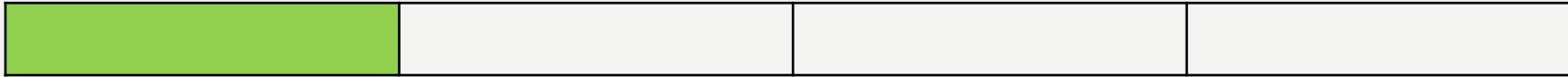
Draw a bar model to help you and don't forget about 'common denominator'.



How much hay do the horses eat together in a day?



$$\frac{2}{3} + \frac{1}{6} = \frac{4}{6} + \frac{1}{6} = ???$$



$$\frac{5}{6} - \frac{1}{4} = \frac{10}{12} - \frac{3}{12} = \frac{7}{12}$$

GUIDED PRACTICE - YOUR TURN



- a) What fraction of a bale of hay does Hattie eat in a day?
- b) Molly eats one quarter of a bale of hay less than Hattie a day.

What fraction of a bale of hay does Molly eat in a day?

help

Draw a bar model to help you and don't forget about 'common denominator'.



How much hay do the horses eat together in a day?

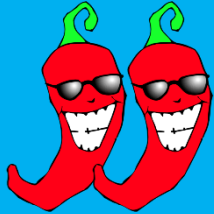


$$\frac{1}{10} + \frac{3}{10} =$$

$$\frac{2}{5} + \frac{1}{5} =$$

$$\frac{3}{5} - \frac{2}{5} =$$

$$\frac{4}{4} - \frac{3}{4} =$$

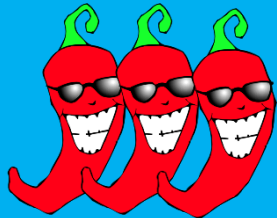


$$\frac{1}{2} + \frac{3}{8} =$$

$$\frac{2}{3} + \frac{1}{9} =$$

$$\frac{3}{4} - \frac{3}{8} =$$

$$\frac{1}{2} - \frac{3}{8} =$$



$$\frac{1}{2} + \frac{3}{7} =$$

$$\frac{2}{3} + \frac{1}{5} =$$

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

$$\frac{2}{4} - \frac{3}{6} =$$



$$\frac{1}{27} + \frac{3}{18} =$$

$$\frac{3}{8} - \frac{1}{6} =$$

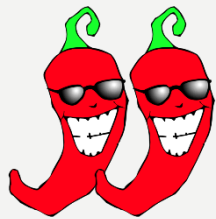


$$\begin{array}{r} \underline{1} \\ 10 \end{array} + \begin{array}{r} \underline{3} \\ 10 \end{array} = \begin{array}{r} \underline{4} \\ 10 \end{array}$$

$$\begin{array}{r} \underline{2} \\ 5 \end{array} + \begin{array}{r} \underline{1} \\ 5 \end{array} = \begin{array}{r} \underline{3} \\ 5 \end{array}$$

$$\begin{array}{r} \underline{3} \\ 5 \end{array} - \begin{array}{r} \underline{2} \\ 5 \end{array} = \begin{array}{r} \underline{1} \\ 5 \end{array}$$

$$\begin{array}{r} \underline{4} \\ 4 \end{array} - \begin{array}{r} \underline{3} \\ 4 \end{array} = \begin{array}{r} \underline{1} \\ 4 \end{array}$$

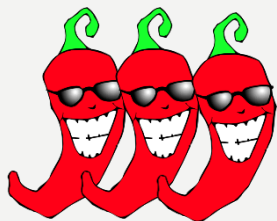


$$\begin{array}{r} \underline{1} \\ 2 \end{array} + \begin{array}{r} \underline{3} \\ 8 \end{array} = \begin{array}{r} \underline{7} \\ 8 \end{array}$$

$$\begin{array}{r} \underline{2} \\ 3 \end{array} + \begin{array}{r} \underline{1} \\ 9 \end{array} = \begin{array}{r} \underline{7} \\ 9 \end{array}$$

$$\begin{array}{r} \underline{3} \\ 4 \end{array} - \begin{array}{r} \underline{3} \\ 8 \end{array} = \begin{array}{r} \underline{3} \\ 8 \end{array}$$

$$\begin{array}{r} \underline{1} \\ 2 \end{array} - \begin{array}{r} \underline{3} \\ 8 \end{array} = \begin{array}{r} \underline{1} \\ 8 \end{array}$$



$$\begin{array}{r} \underline{1} \\ 2 \end{array} + \begin{array}{r} \underline{3} \\ 7 \end{array} = \begin{array}{r} \underline{13} \\ 14 \end{array}$$

$$\begin{array}{r} \underline{2} \\ 3 \end{array} + \begin{array}{r} \underline{1} \\ 5 \end{array} = \begin{array}{r} \underline{13} \\ 15 \end{array}$$

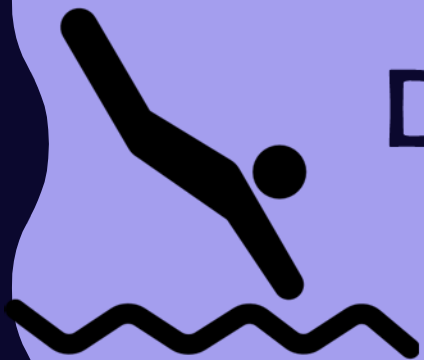
$$\begin{array}{r} \underline{3} \\ 5 \end{array} - \begin{array}{r} \underline{1} \\ 3 \end{array} = \begin{array}{r} \underline{4} \\ 15 \end{array}$$

$$\begin{array}{r} \underline{2} \\ 4 \end{array} - \begin{array}{r} \underline{3} \\ 6 \end{array} = \begin{array}{r} \underline{0} \end{array}$$



$$\begin{array}{r} \underline{1} \\ 27 \end{array} + \begin{array}{r} \underline{3} \\ 18 \end{array} = \begin{array}{r} \underline{11} \\ 54 \end{array}$$

$$\begin{array}{r} \underline{3} \\ 8 \end{array} - \begin{array}{r} \underline{1} \\ 6 \end{array} = \begin{array}{r} \underline{10} \\ 48 \end{array} \quad \begin{array}{r} \underline{5} \\ 24 \end{array}$$



DIVE DEEPER 1

1)

Use the same digit in both boxes to complete the calculation.
Is there more than one way to do it?

$$\frac{\boxed{}}{\boxed{20}} + \frac{\boxed{1}}{\boxed{}} = \frac{\boxed{9}}{\boxed{20}}$$

3)

Eva has a full tin of paint. She uses $\frac{1}{3}$ of the tin on Friday, $\frac{1}{21}$ on Saturday and $\frac{2}{7}$ on Sunday. How much paint does she have left?

2)



Fatima

$$\frac{5}{6} + \frac{1}{9}$$

We can't calculate this as the denominators are different.

It's the same as...

$$\frac{15}{18} + \frac{2}{18}$$



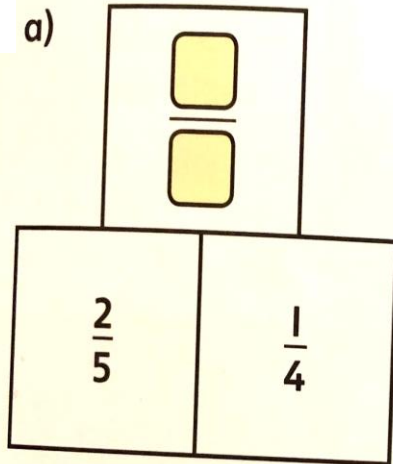
Reese

Who is correct? Prove it.

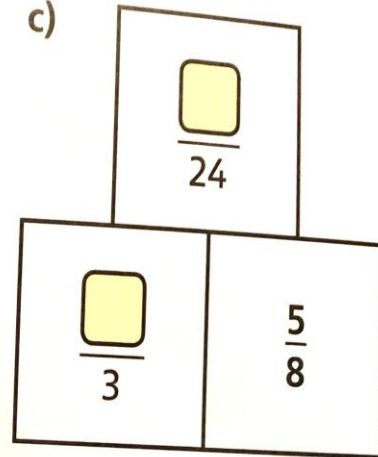
4)

Complete the following addition pyramids.

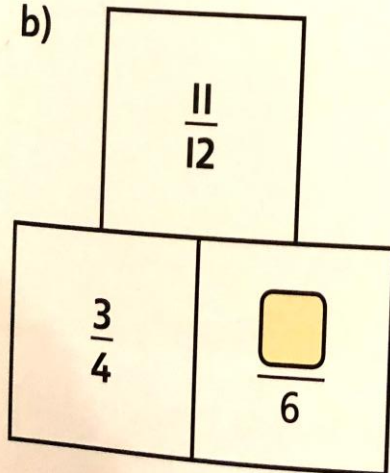
a)



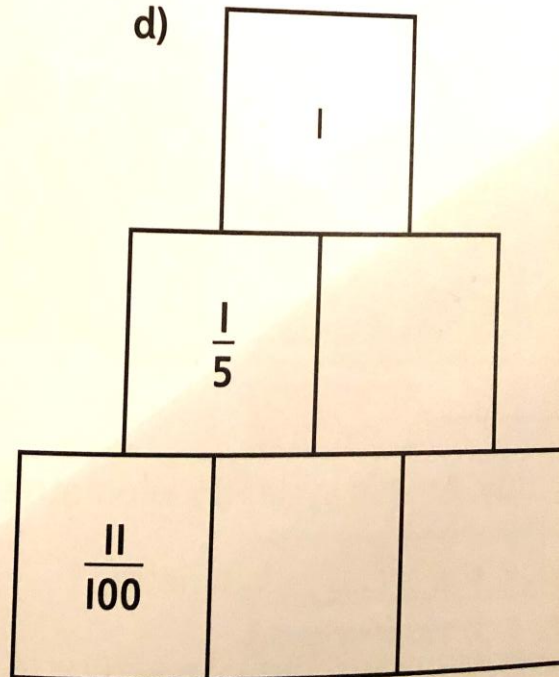
c)



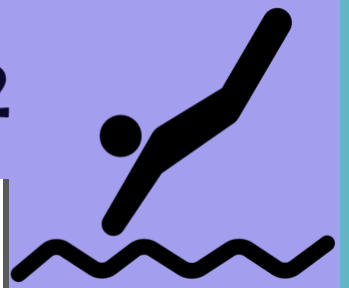
b)



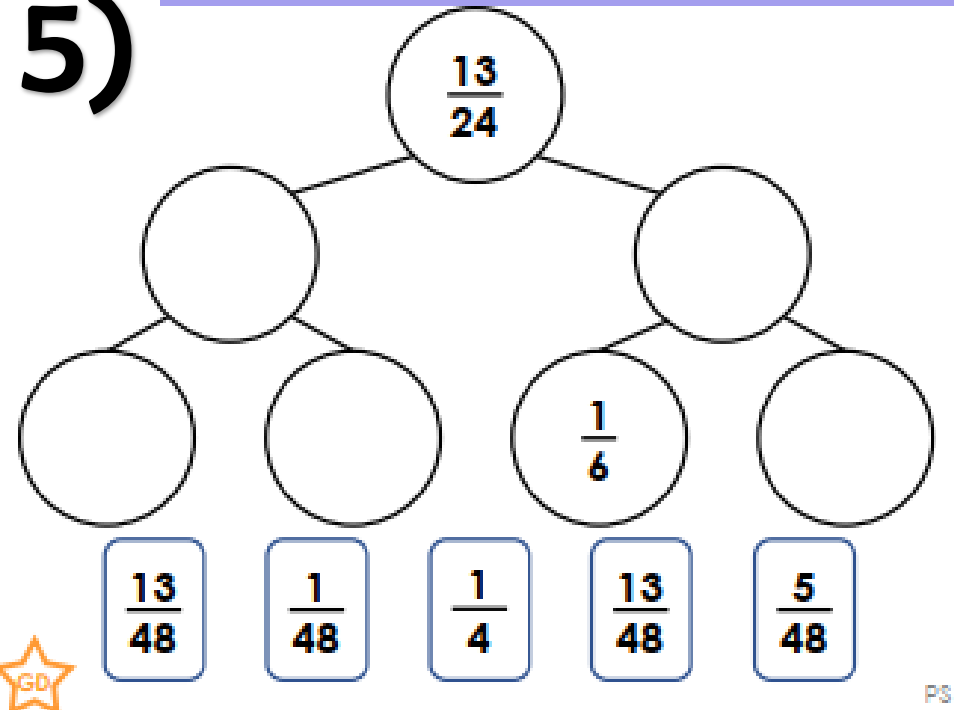
d)



DIVE DEEPER 2



5)



Dexter subtracted $\frac{3}{5}$ from a fraction and his answer was $\frac{8}{45}$

What fraction did he subtract $\frac{3}{5}$ from?
Give your answer in its simplest form.





DIVE DEEPER 1

1)

Use the same digit in both boxes to complete the calculation.
Is there more than one way to do it?

$$\frac{4}{20} + \frac{1}{4} = \frac{9}{20}$$

$$\frac{5}{20} + \frac{1}{5} = \frac{9}{20}$$

$$\frac{\boxed{}}{\boxed{20}} + \frac{\boxed{1}}{\boxed{}} = \frac{\boxed{9}}{\boxed{20}}$$

3)

Eva has a full tin of paint. She uses $\frac{1}{3}$ of the tin on Friday, $\frac{1}{21}$ on Saturday and $\frac{2}{7}$ on Sunday. How much paint does she have left?

2)



Fatima

$$\frac{5}{6} + \frac{1}{9}$$

We can't calculate this as the denominators are different.

It's the same as...

$$\frac{15}{18} + \frac{2}{18}$$



Reese

Who is correct? Prove it.

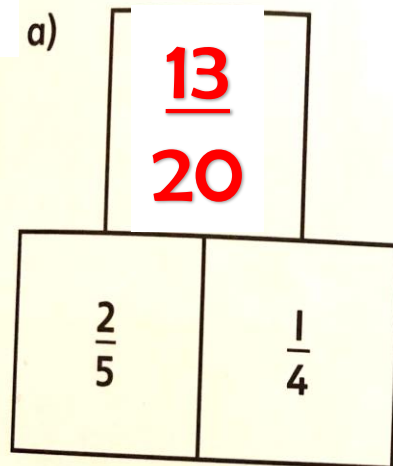
1
3



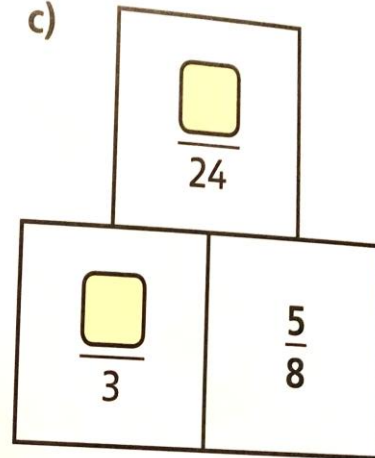
4)

Complete the following addition pyramids.

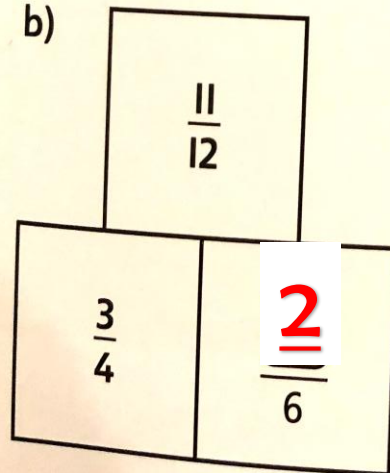
a)



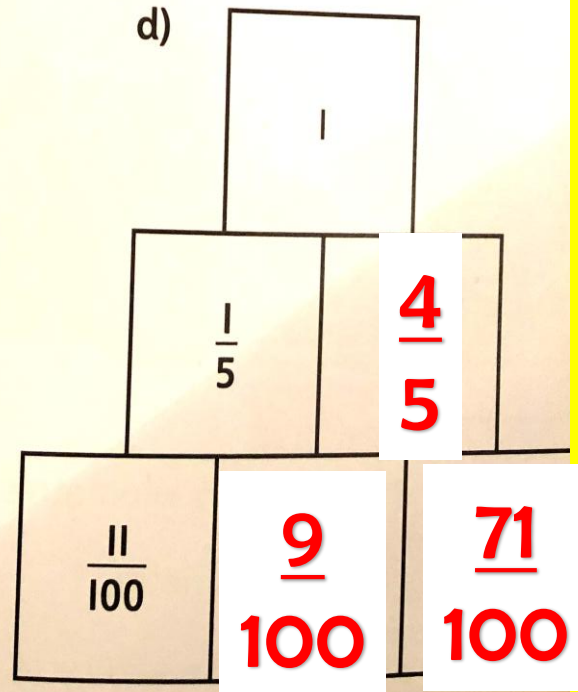
c)



b)



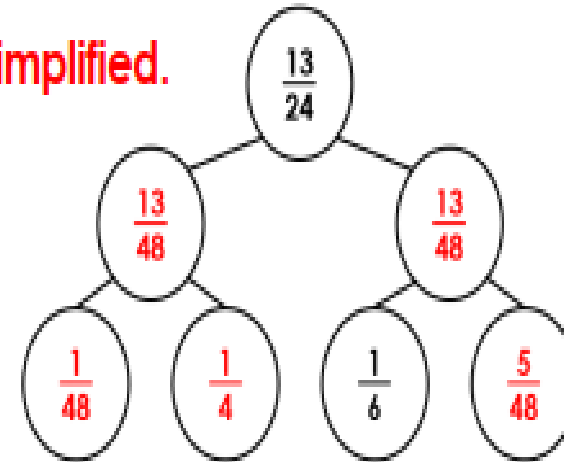
d)



DIVE DEEPER 2

5)

9a. Also accept answers which have not been simplified.

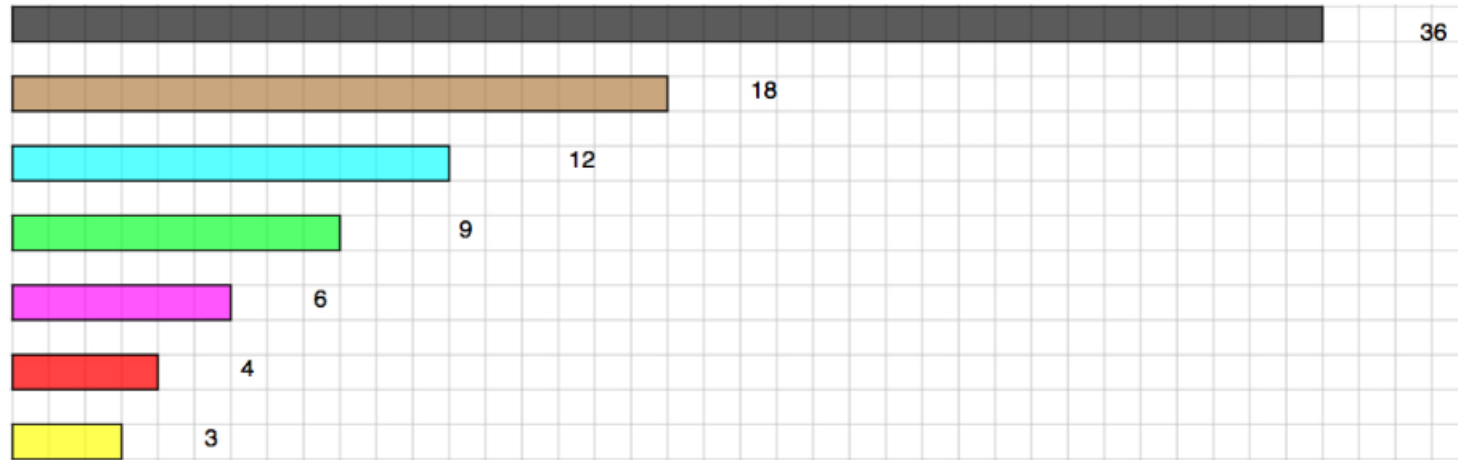


$$\frac{8}{45} + \frac{3}{5} = \frac{8}{45} + \frac{27}{45}$$

$$\frac{8}{45} + \frac{27}{45} = \frac{35}{45} = \frac{7}{9}$$

Dexter subtracted $\frac{3}{5}$ from $\frac{7}{9}$

Here are some lengths, which could be made out of connecting cubes or strips of coloured paper/card:



To start with, the **black** will be counted as ONE so that the **brown** one is $\frac{1}{2}$, the **blue** one is $\frac{1}{3}$, etc.

Using different combinations, put them together to equal the length of the **black**, which is 36 long.

For example, if you were to choose the **brown**, **blue** and **magenta** (pink) you could write them down as the $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{6}$

So we would have: $\frac{1}{2} + \frac{1}{3} + \frac{1}{6} = 1$

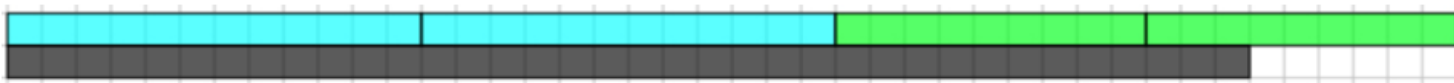
MOVING ON

Choose any four of the strips, except the **black** one, and put them together. Now, compare them with the **black**.

Here are two examples to start you off. Have a go and find as many different fours as you can.



Using a 3, 6, 12 and an 18 makes $1\frac{1}{12}$



Using two 12s and two 9s makes $1\frac{1}{6}$

GOING EVEN FURTHER

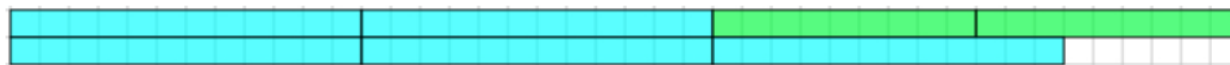
Now the **light blue** strip is the ONE (1).

Use the same fours that you chose before but this time, compare them with the light blue strip instead of the **black**.

Here are the examples used above, but this time compared with a light blue:



Comparing these four to the **light blue** it makes $3\frac{1}{4}$



Comparing these four to the **light blue** it makes $3\frac{1}{2}$

Now you go ahead with the fours that you have chosen.

