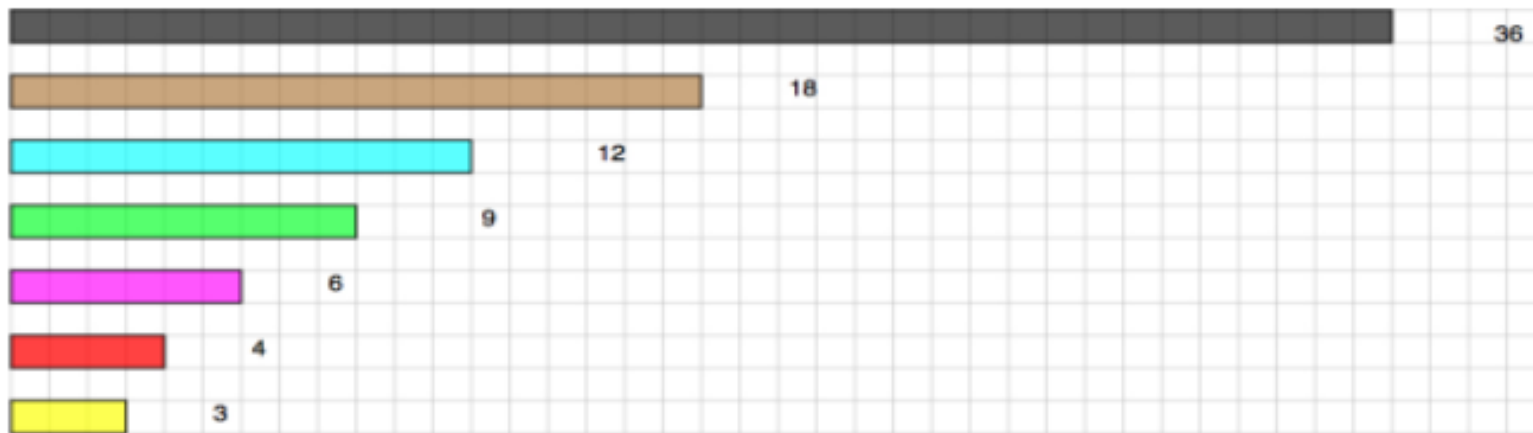# Fraction Lengths

Age 7 to 11 ★★

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.

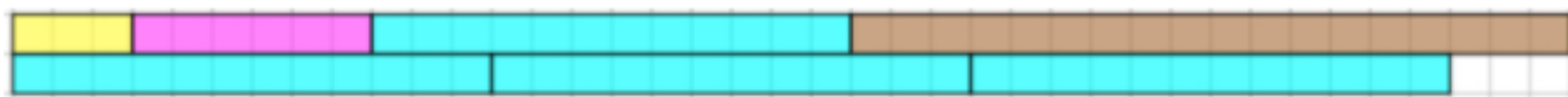Using a 3, 6, 12 and an 18 makes $1\frac{1}{12}$

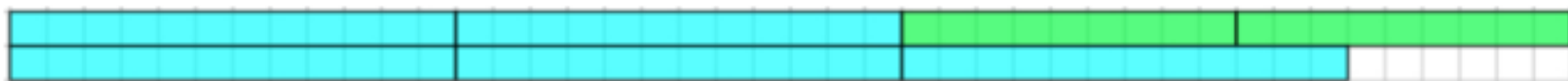Using two 12s and two 9s makes $1\frac{1}{6}$

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.

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What can you say about the results you got when comparing your fours with **black** and comparing them with the light blue?