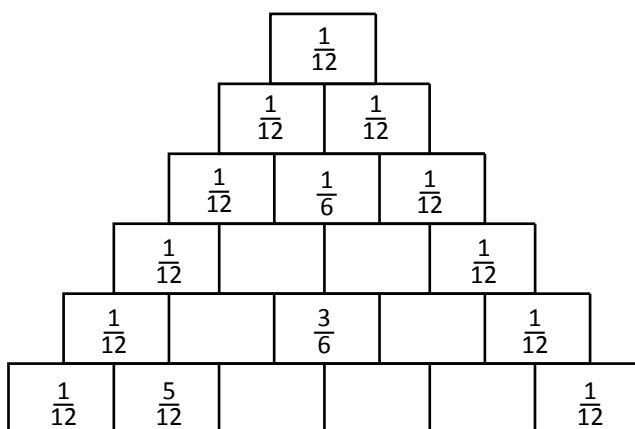


<h1>Big triangle of fractions</h1>	<h2>Skills practised:</h2> <ul style="list-style-type: none">Finding an equivalent fraction to non-unit fractions (denominator ≤ 12)Adding fractions with related denominators
<p><i>Children add fractions with related denominators and find equivalent fractions to identify patterns.</i></p>	
<p>Conjecture: <i>Patterns can be identified in a triangle of fractions based on Pascal's Triangle.</i></p>	
<p>What to do:</p> <p><i>Children work individually or in pairs.</i></p> <ol style="list-style-type: none">Look at the triangle below.Each number in the second row comes from adding next-door numbers in the first row. The two outside numbers always stay the same ($\frac{1}{12}$).Complete the triangle. You will need to recognise equivalent fractions and write in the total in the simplest form. <p>Discuss what you notice.</p> <div><div><div><div><div><div></div><div>$\frac{1}{12}$</div><div></div></div><div><div><div>$\frac{1}{12}$</div><div>$\frac{1}{12}$</div></div><div><div><div>$\frac{1}{12}$</div><div>$\frac{1}{6}$</div><div>$\frac{1}{12}$</div></div><div><div><div>$\frac{1}{12}$</div><div></div><div></div><div>$\frac{1}{12}$</div></div><div><div><div>$\frac{1}{12}$</div><div></div><div>$\frac{3}{6}$</div><div></div><div>$\frac{1}{12}$</div></div><div><div><div>$\frac{1}{12}$</div><div>$\frac{5}{12}$</div><div></div><div></div><div></div><div>$\frac{1}{12}$</div></div></div></div></div></div></div></div></div></div></div>	
<ol style="list-style-type: none">Add a new line (7 squares) to the triangle where the 3rd space along has $1\frac{1}{4}$ and the 4th has $1\frac{2}{3}$.	
<p>CHALLENGE: Re-write $1\frac{1}{4}$ as $1\frac{3}{12}$ and $1\frac{2}{3}$ as $1\frac{8}{12}$ then add another line, keeping all the fractions as 12ths. How many lines can you write?</p>	
<ol style="list-style-type: none">Add another line (8 squares).Add the fractions in each line, writing each one as a number of 12ths.Write the totals as a number of 12ths and look at the pattern.Write the totals as mixed numbers and simplified fractions and look at the pattern.	
<p>Aim:</p> <ul style="list-style-type: none">To explore patterns in additionTo change related fractions from their simplest form to 12ths and identify patterns	<p>Minimum number of calculations expected</p> <p>20</p>

Big triangle of fractions

- Look at the triangle below.



Each number in the second row comes from adding next-door numbers in the first row.

The two outside numbers always stay the same ($\frac{1}{12}$).

- Complete the triangle. Look for equivalent fractions and write in the total in the simplest form.

What do you notice?

- Add a new line (7 squares) to the triangle where the 3rd space along has $1\frac{1}{4}$ and the 4th has $1\frac{2}{3}$

Challenge

Re-write $1\frac{1}{4}$ as $1\frac{3}{12}$ and $1\frac{2}{3}$ as $1\frac{8}{12}$ then add another line, keeping all the fractions as 12ths. How many lines can you write?

- Add another line (8 squares).
- Add the fractions in each line. Write each one as a number of 12ths.
- Write the totals as a number of 12ths and look at the pattern.
- Write the totals as mixed numbers and simplified fractions. Look at the pattern.