Harmonic Triangles

Can you see what the rules for making the next line are?

Can you work out the next two rows?

Will the second diagonal ($1/2$, $1/6$, $1/12$ ...) always contain unit fractions?

Can you prove it?

$$\frac{1}{1}$$

$$\frac{1}{2} \qquad \frac{1}{2}$$

$$\frac{1}{3} \qquad \frac{1}{6} \qquad \frac{1}{3}$$

$$\frac{1}{4} \qquad \frac{1}{12} \qquad \frac{1}{12} \qquad \frac{1}{4}$$

$$\frac{1}{5} \qquad \frac{1}{20} \qquad \frac{1}{30} \qquad \frac{1}{20} \qquad \frac{1}{5}$$

$$\frac{1}{6} \qquad \frac{1}{30} \qquad \frac{1}{60} \qquad \frac{1}{60} \qquad \frac{1}{30} \qquad \frac{1}{6}$$