Pentagons, etc.
(The big red and lower red triangles are similar.)


1

$$
\begin{gathered}
\varphi=1+1 / \varphi \\
\varphi^{2}-\varphi-1=0 \\
\varphi=\frac{1}{2}(1+\sqrt{5}) \\
\text { "diameter" of pentagon }
\end{gathered}
$$

