

Rhombic fans

Notice the sets of parallel lines, one of which is shown in red, and the angles in arithmetic progression. (Prove this.) Work out the supplementary angles in each rhombus and you'll see that P, P' ; Q, Q' ; R, R' ; S, S' are the same rhombuses in different orientations.

Whether $a = \frac{\pi}{2n+1}$ or $\frac{\pi}{2n}$, the number of distinct rhombuses is n .

$$a = \frac{\pi}{5}$$

$$a = \frac{\pi}{6}$$

