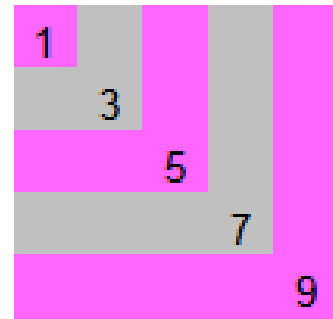


# PREUVES SANS MOT



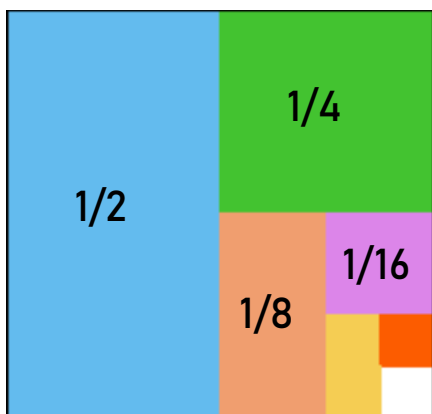
La somme de deux nombres triangulaires consécutifs est un carré :

$$1+2+\dots+n + 1+2+\dots+n+1 = (n+1)^2$$

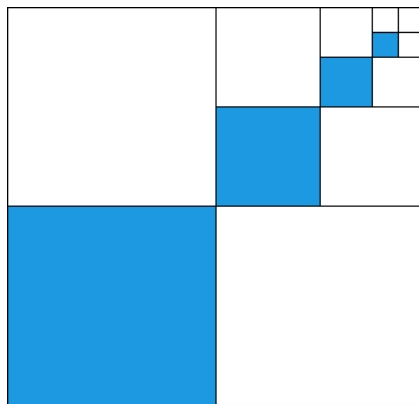


La somme des premiers nombres impairs consécutifs est un carré

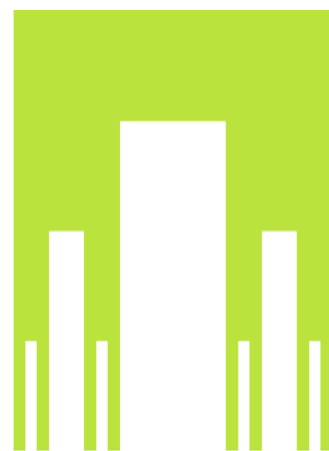
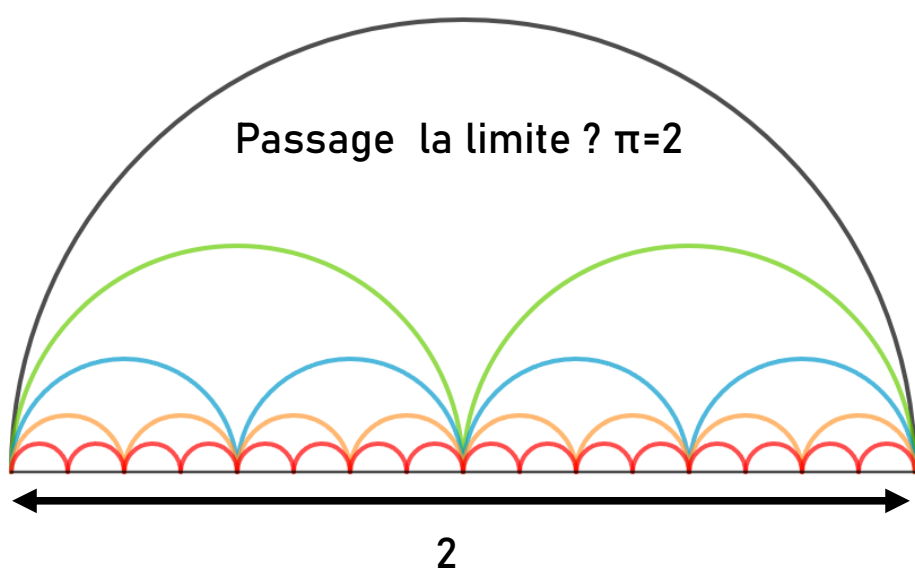
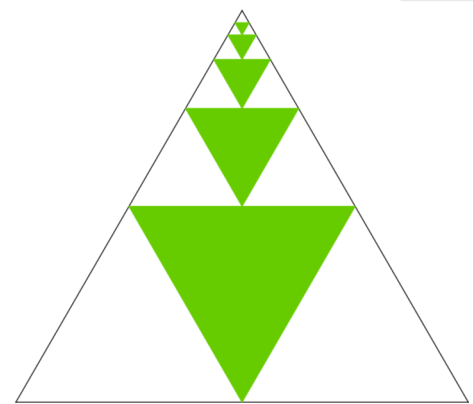
$$1+3+5+7+\dots+2n+1 = (n+1)^2$$



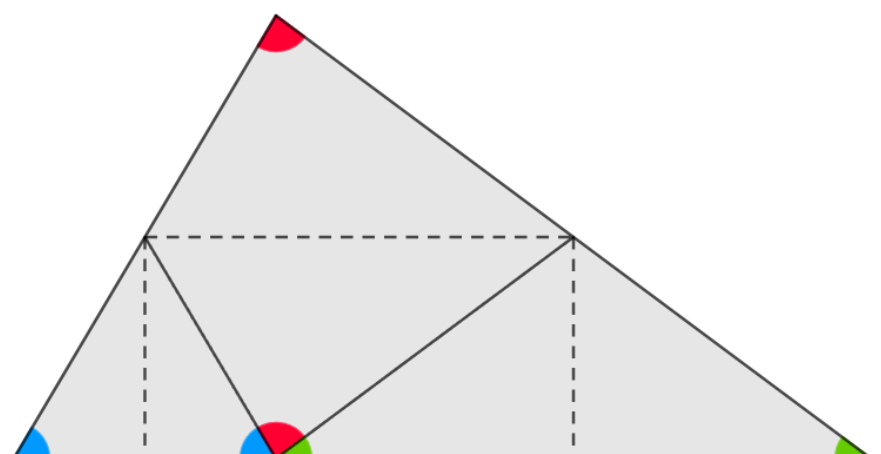
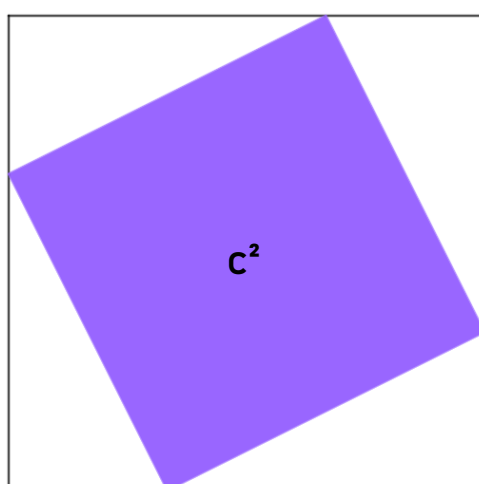
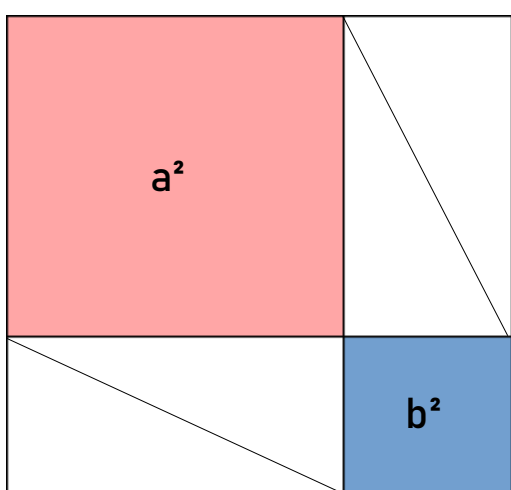
$$\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32} + \dots = 1$$



$$\frac{1}{4} + \frac{1}{16} + \frac{1}{64} + \dots = \frac{1}{4} + \left(\frac{1}{4}\right)^2 + \left(\frac{1}{4}\right)^3 + \dots = \frac{1}{3}$$



$$\frac{2}{3} + \frac{4}{9} + \frac{8}{27} + \dots = \frac{2}{3} + \left(\frac{2}{3}\right)^2 + \left(\frac{2}{3}\right)^3 + \dots = 2$$



Sauriez-vous reconnaître les deux propriétés ci-dessus ?