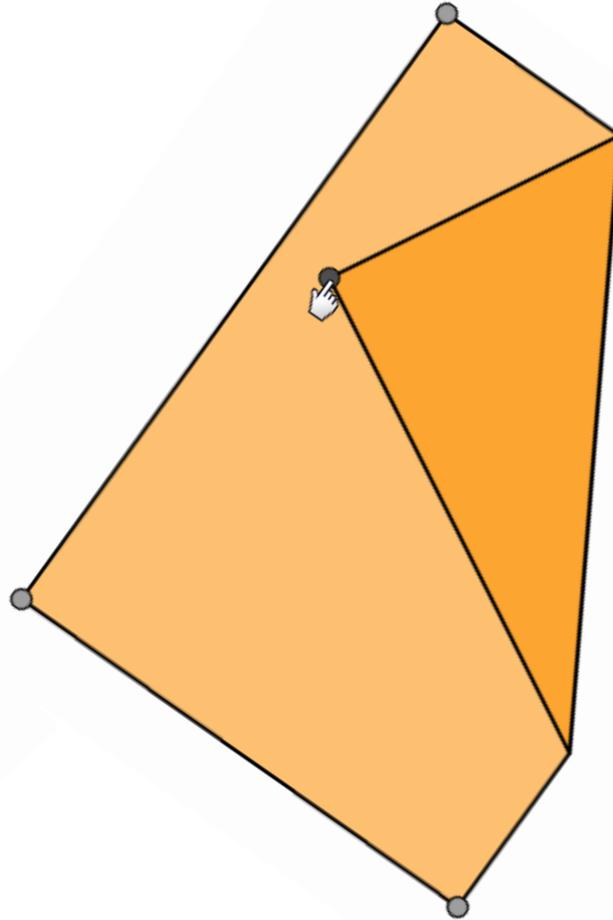
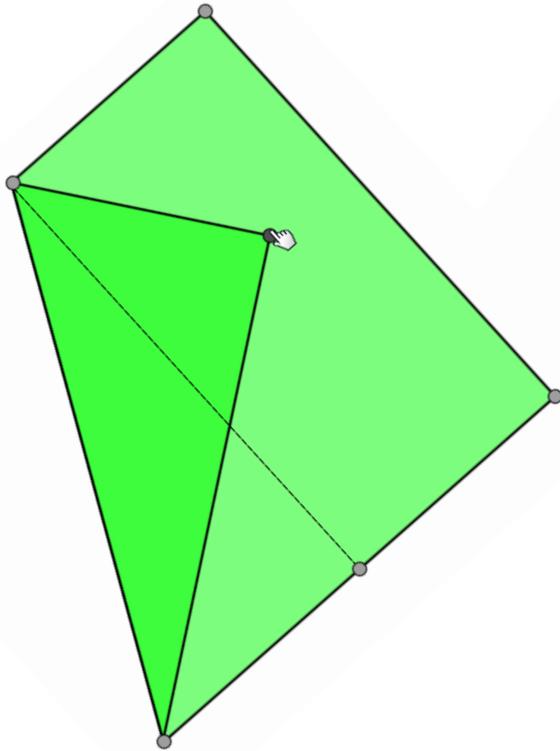
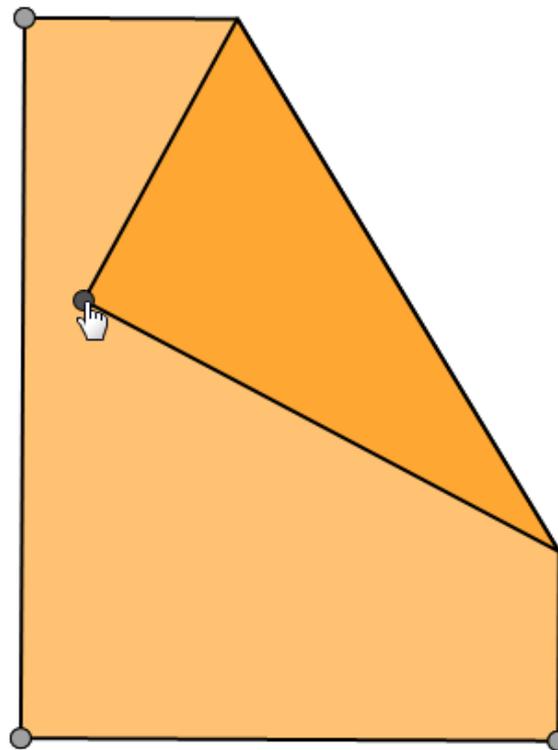
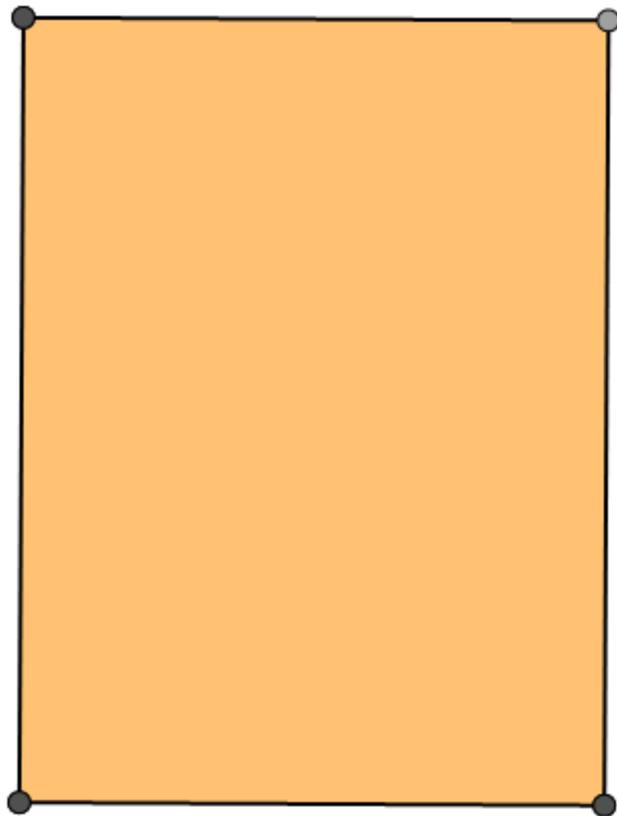


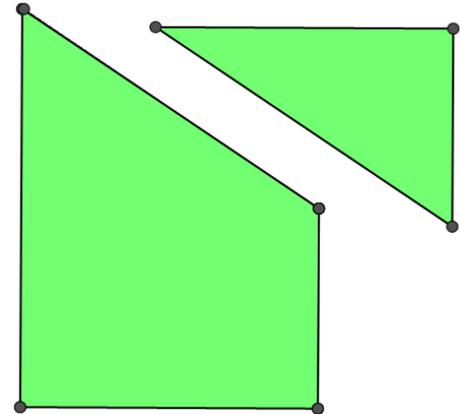
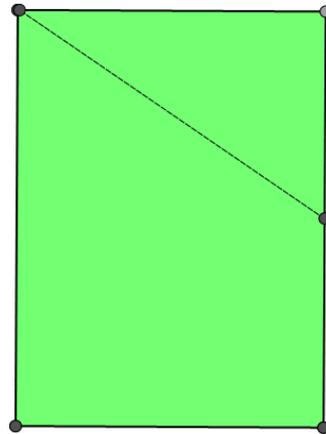
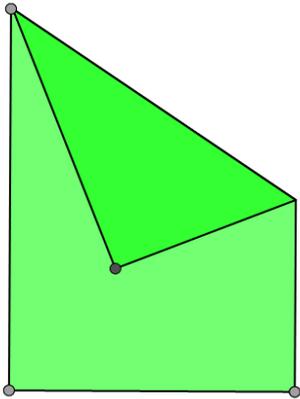
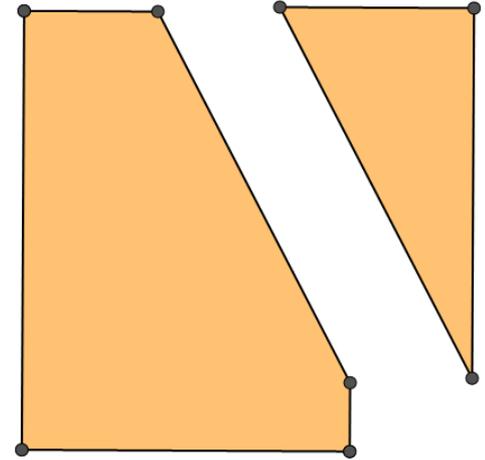
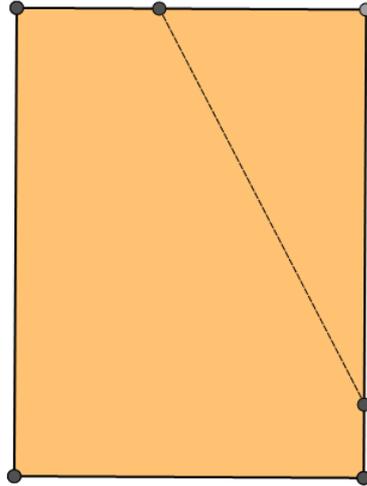
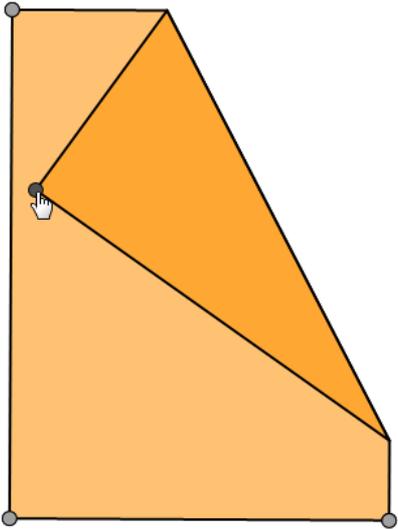
# I triangoli



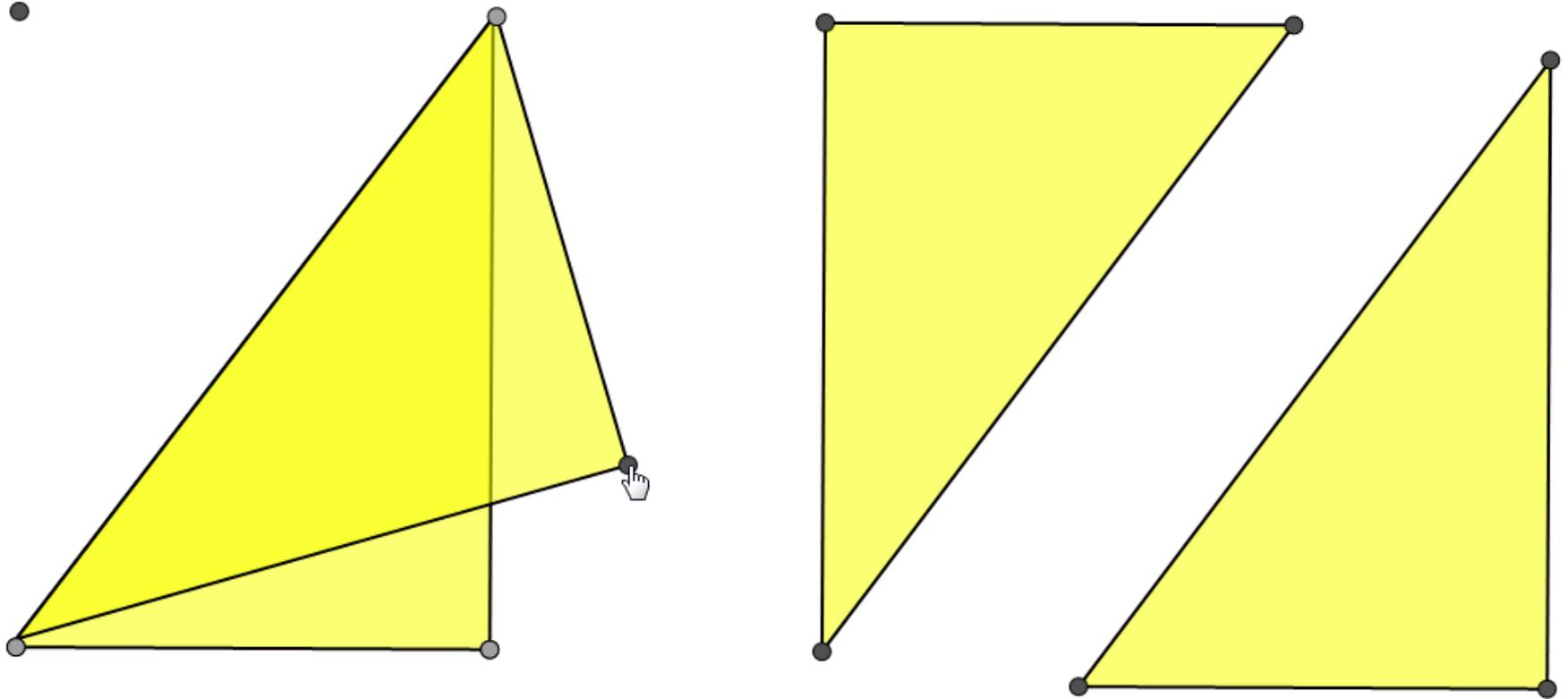
Come posso ottenere triangoli piegando un foglio di carta rettangolare?



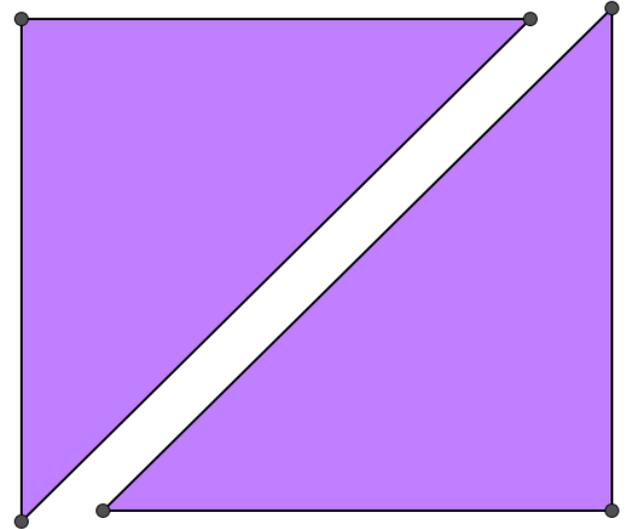
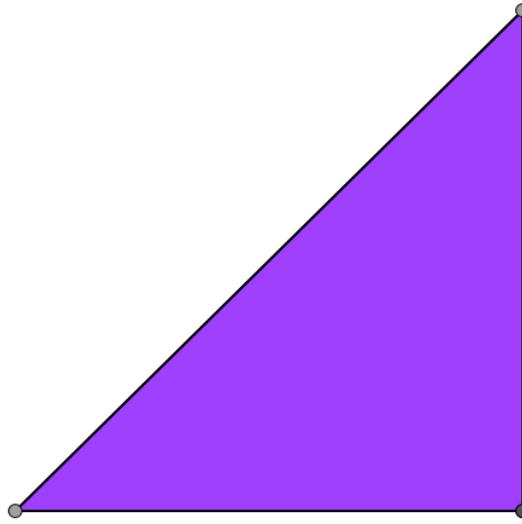
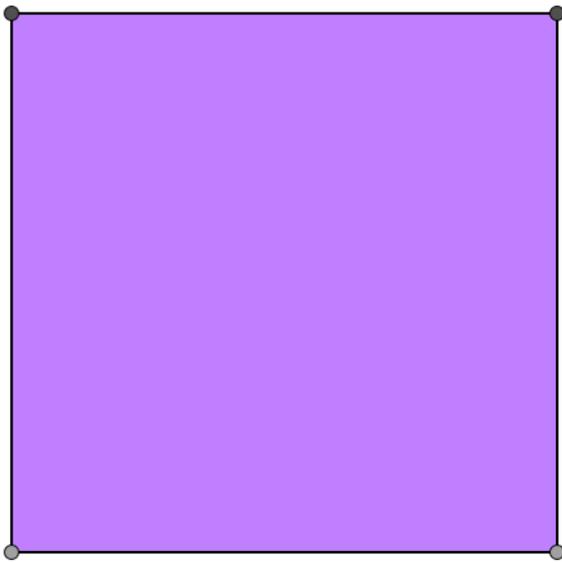
Portando un vertice all'interno del rettangolo ottengo un triangolo (generalmente scaleno) e un quadrilatero oppure un pentagono. Quando ottengo un pentagono? Quando un quadrilatero?



Se durante la piegatura piego su un vertice ottengo un quadrilatero, in caso contrario un pentagono.



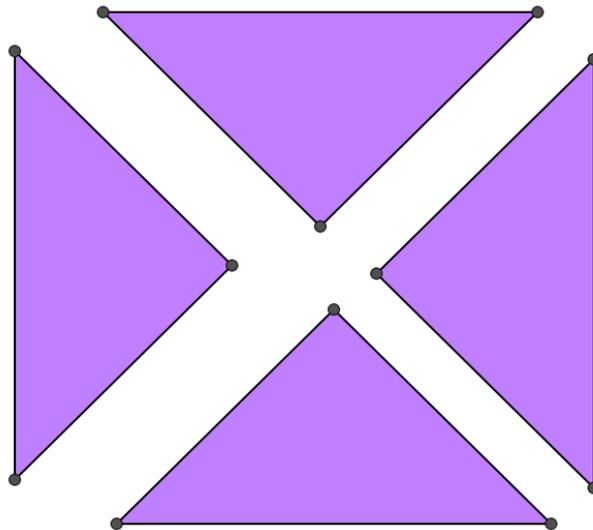
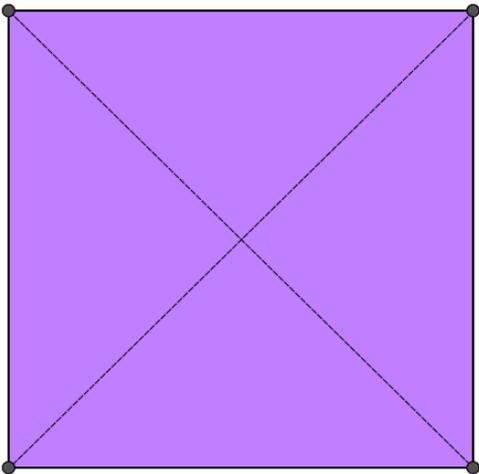
Se pieghiamo il foglio in modo da attraversare con le piegature due vertici otteniamo due triangoli rettangoli



Cosa succede se proviamo la stessa piegatura su un foglio quadrato?

Durante la piegatura i due vertici coincidono.

Otteniamo due triangoli isosceli rettangoli. Come posso verificare che sono rettangoli? Come posso verificare che sono isosceli?



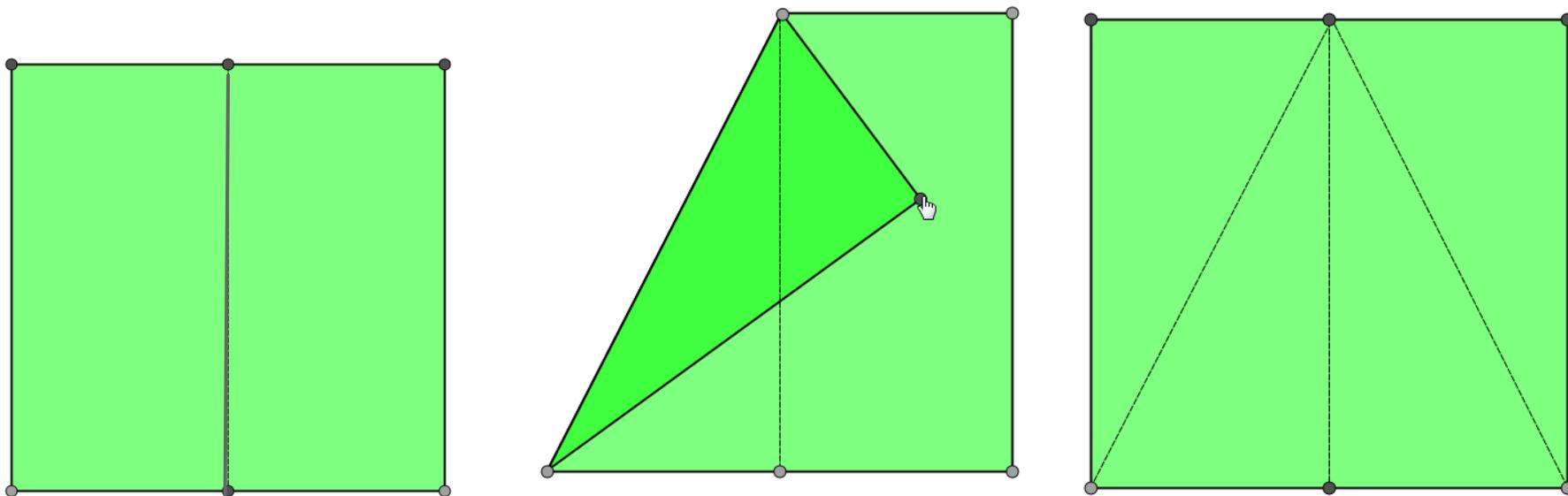
Se ripeto la piegatura sugli altri due vertici, ottengo quattro triangoli isosceli rettangoli.

Dove è stavolta l'angolo retto?

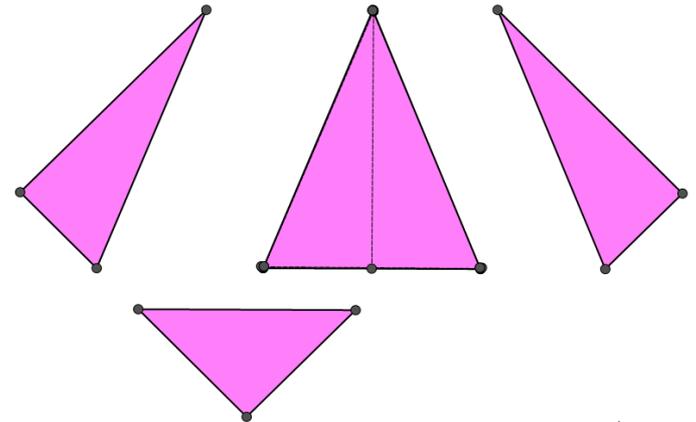
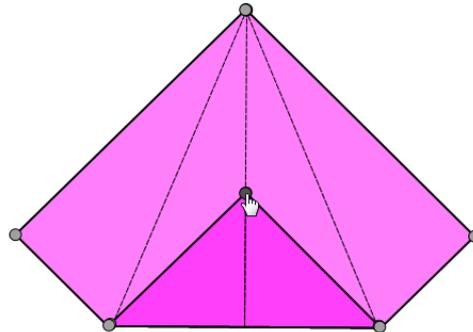
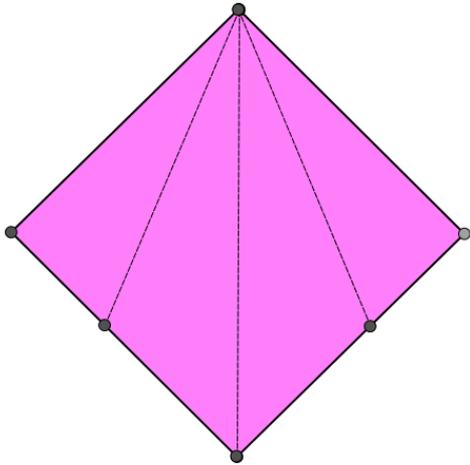
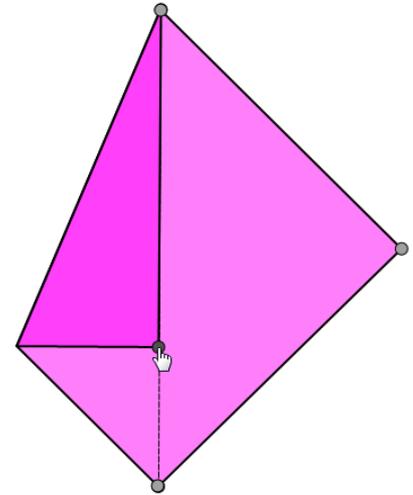
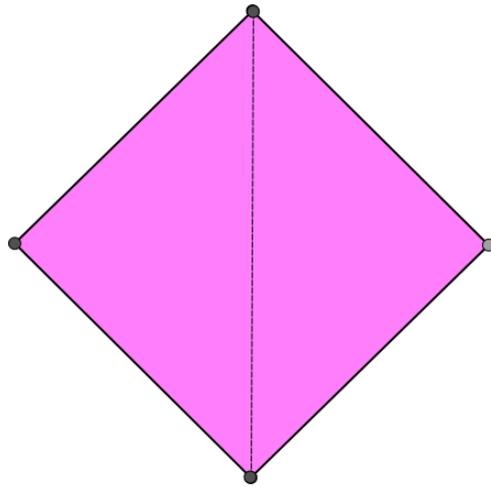
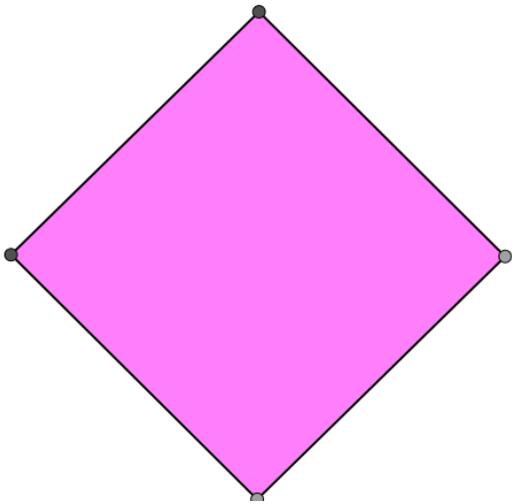
Come posso verificare che è retto?

Come posso verificare che i triangoli sono isosceli?

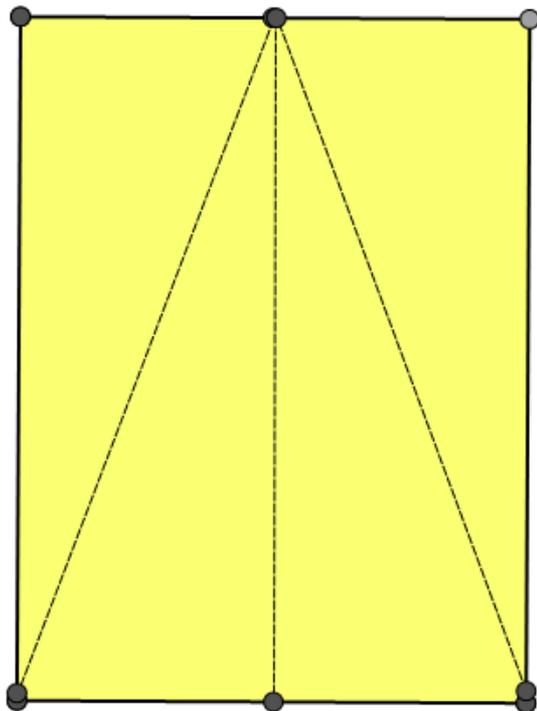
Come posso ottenere triangoli isosceli che non siano rettangoli utilizzando un foglio quadrato?



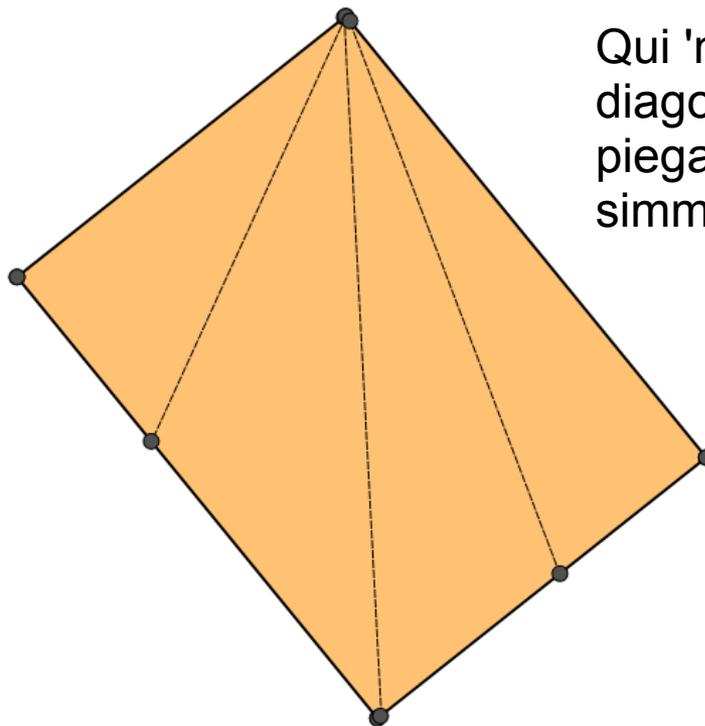
Abbiamo ottenuto tre triangoli. Uno è quello isoscele non rettangolo. Come sono gli altri? Come verifico?



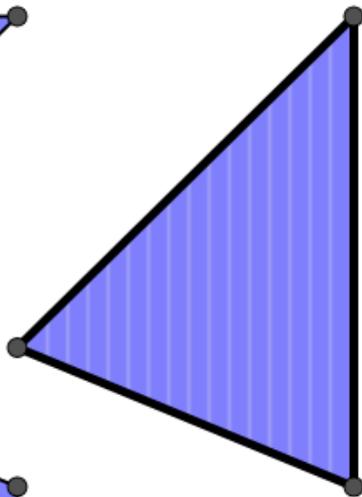
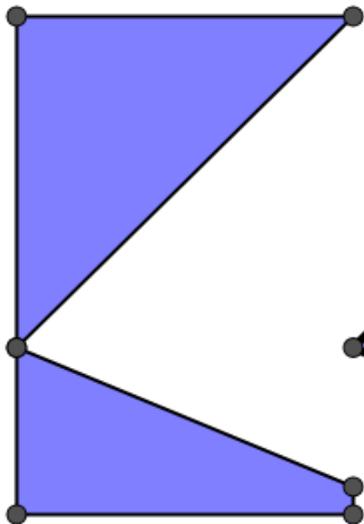
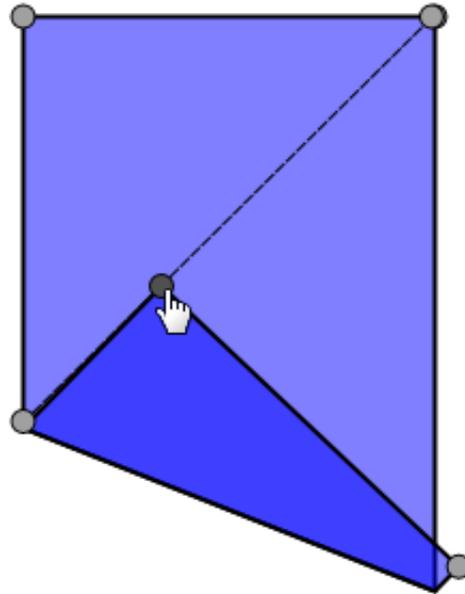
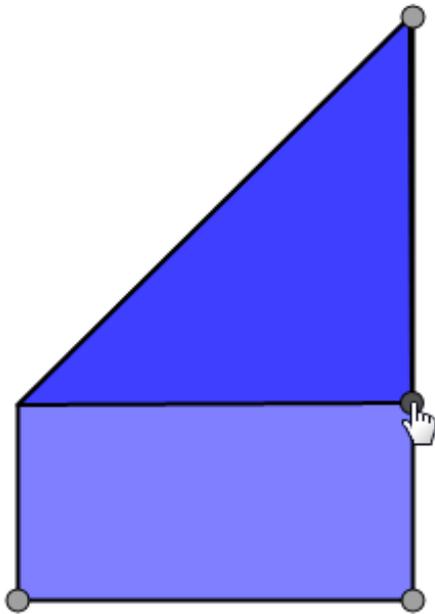
Abbiamo ottenuto quattro triangoli.  
Uno è quello isoscele non rettangolo.  
Come sono gli altri? Come verifico?



Posso utilizzare le stesse piegature  
con il rettangolo?



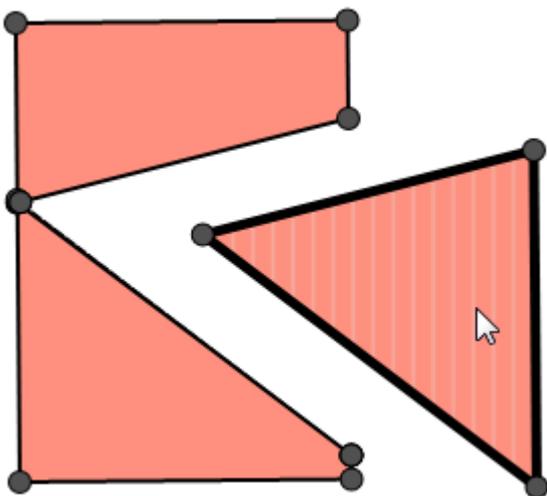
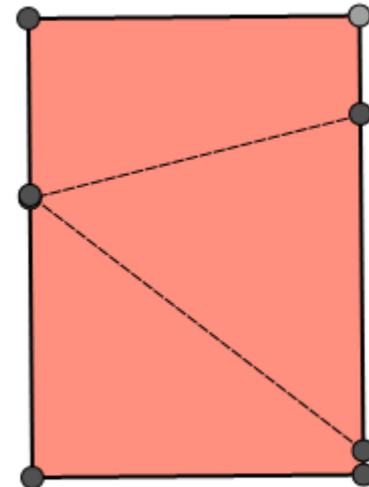
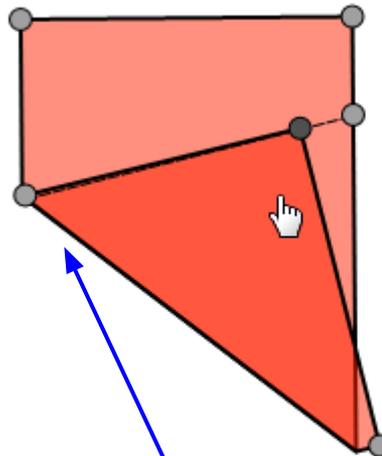
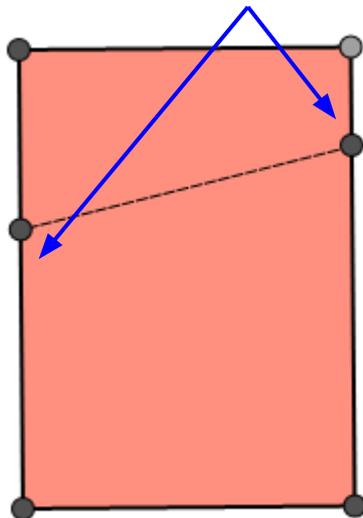
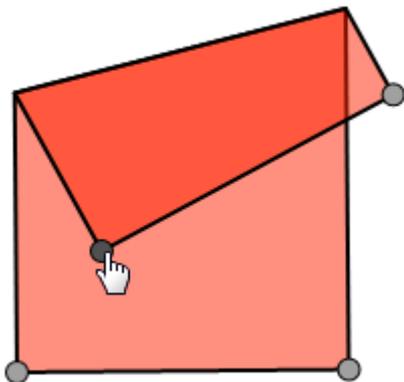
Qui 'non funziona': la  
diagonale (la prima  
piegatura) non è asse di  
simmetria



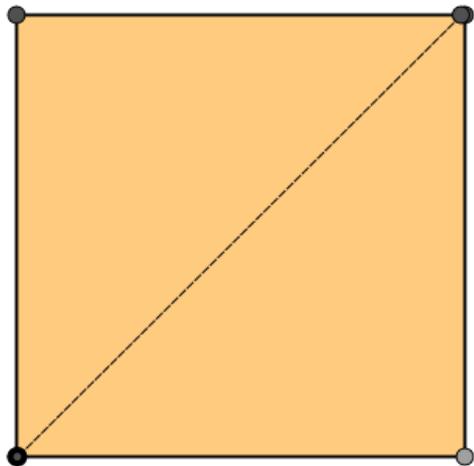
Questa procedura favorisce una riflessione sugli angoli.

Ma anche così

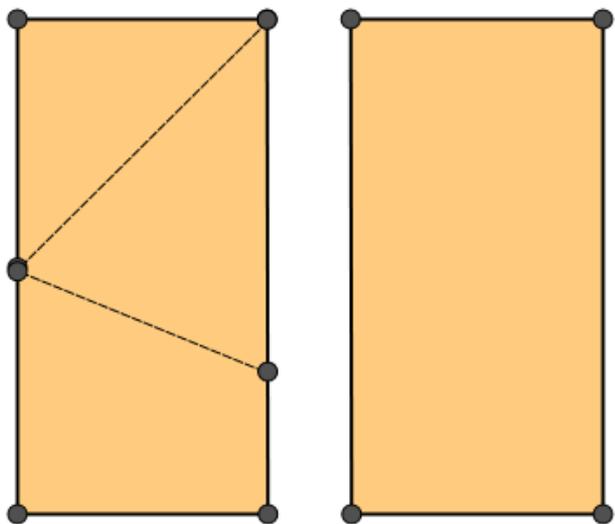
180° meno la  
misura dell'angolo  
al vertice



Il 'trucco' sta in questa piegatura,  
che divide a metà l'angolo che  
completa i 180° con l'angolo al  
vertice

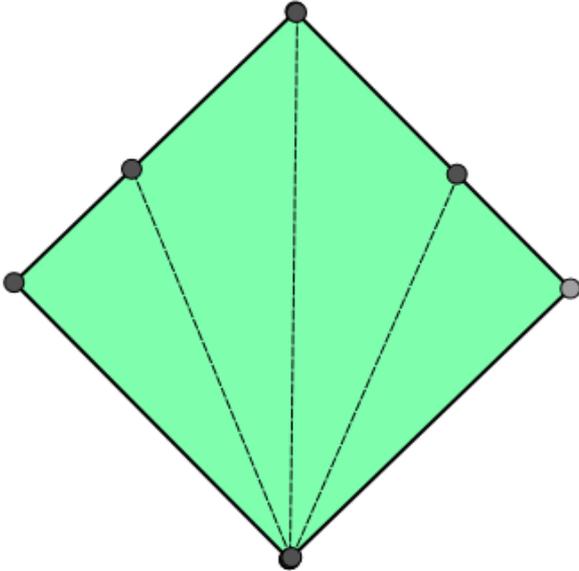
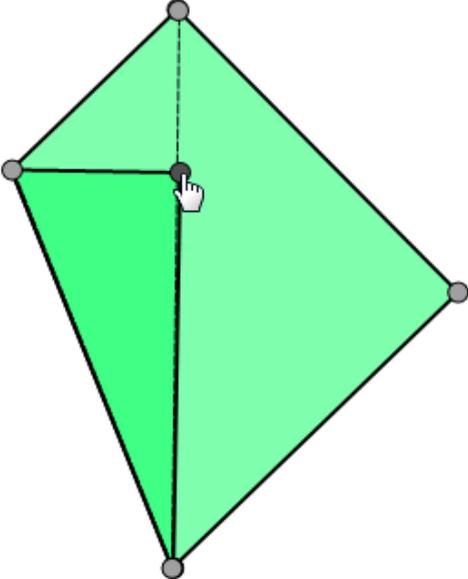
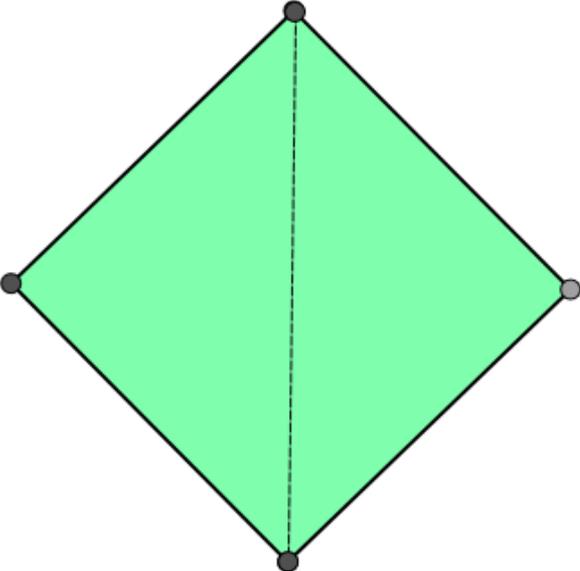


Perchè non funziona con un foglio quadrato?



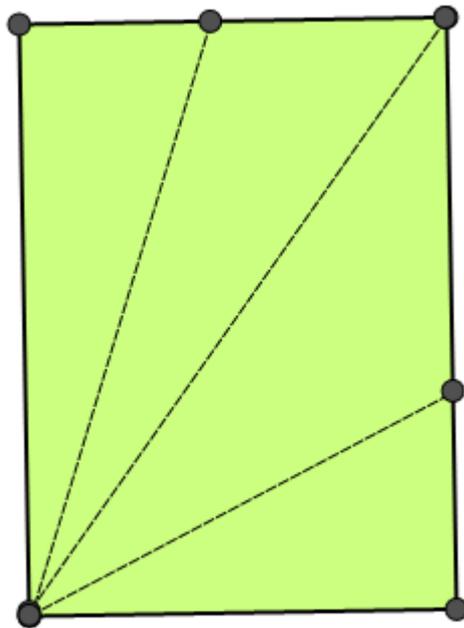
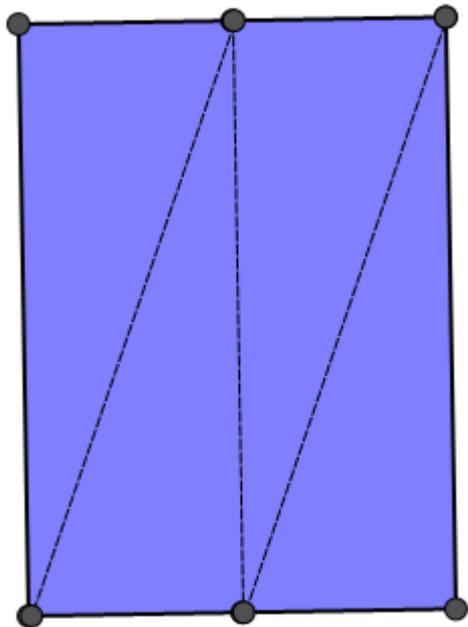
Possiamo però dividere il quadrato in due rettangoli ed ottenere i triangoli isosceli

Utilizzando pieghe regolari, possiamo ottenere triangoli scaleni?



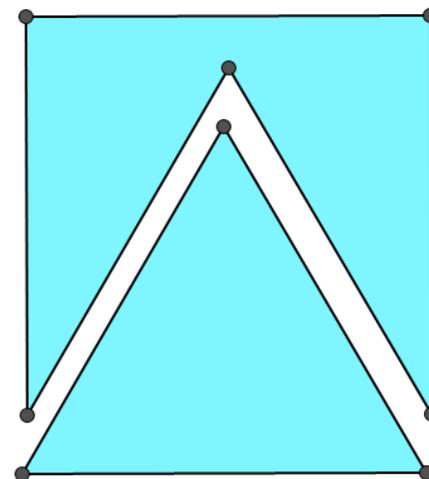
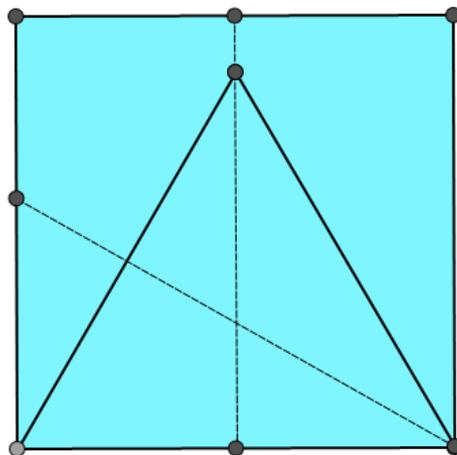
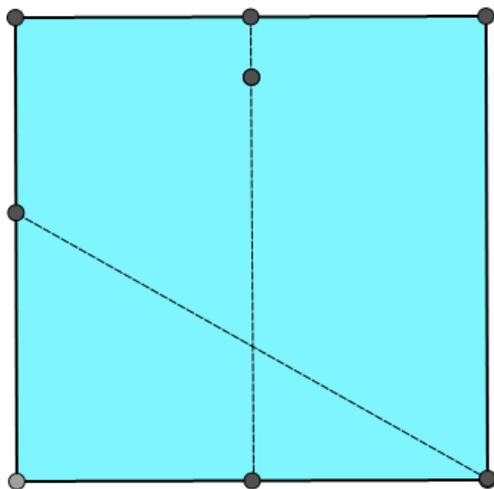
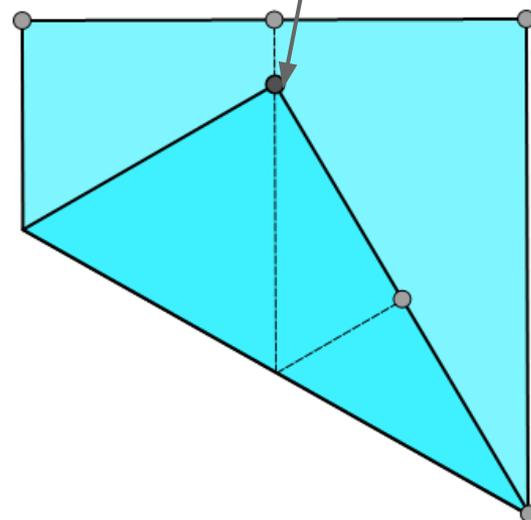
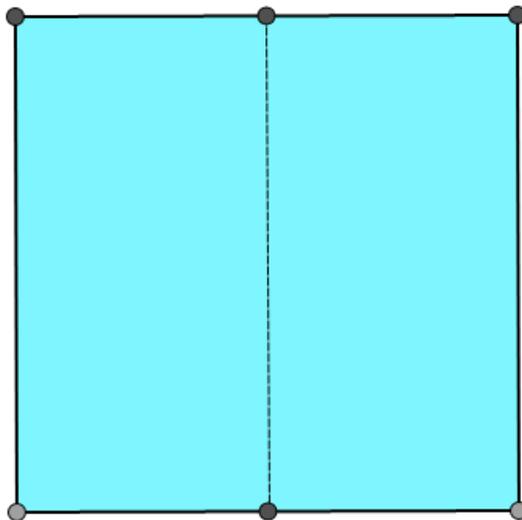
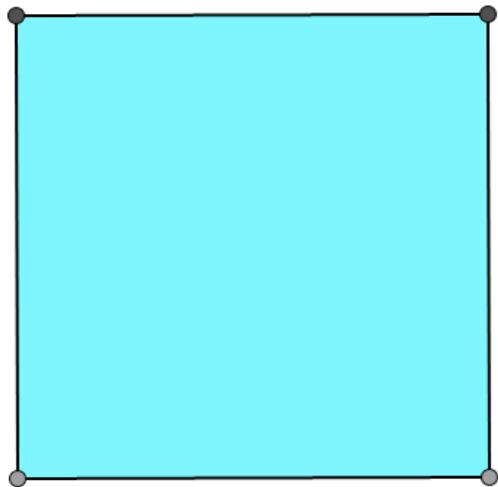
Con queste piegature del quadrato otteniamo 4 triangoli scaleni: due rettangoli e due ottusangoli

Piegando un rettangolo



Come ottenere un triangolo equilatero?

Segnare il punto



E ancora....

