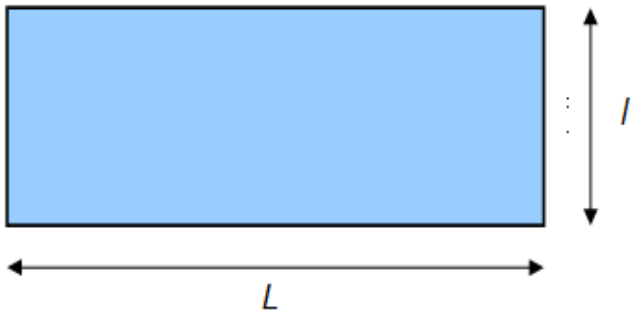
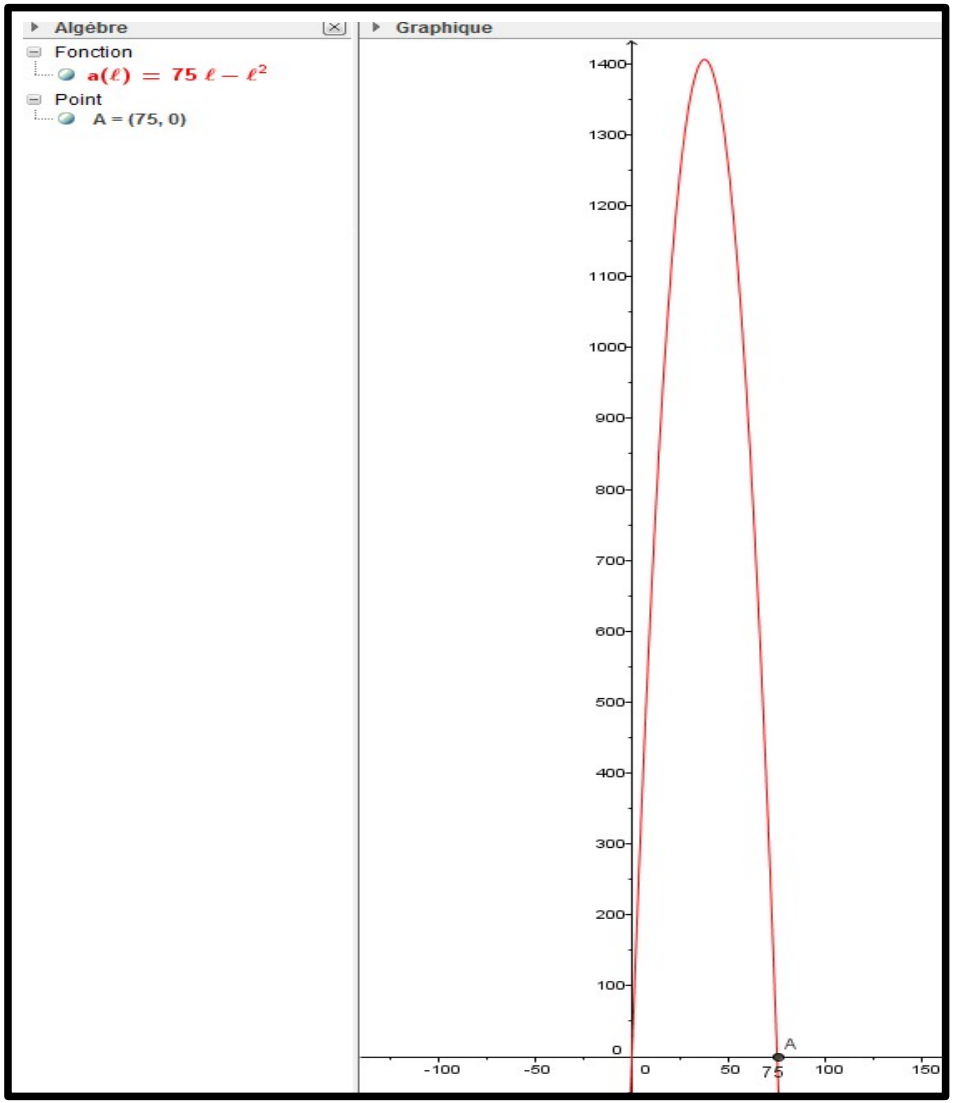
Problèmes Isopérimétriques

Les rectangles

- Quel rectangle a la plus grande aire à périmètre fixé ?

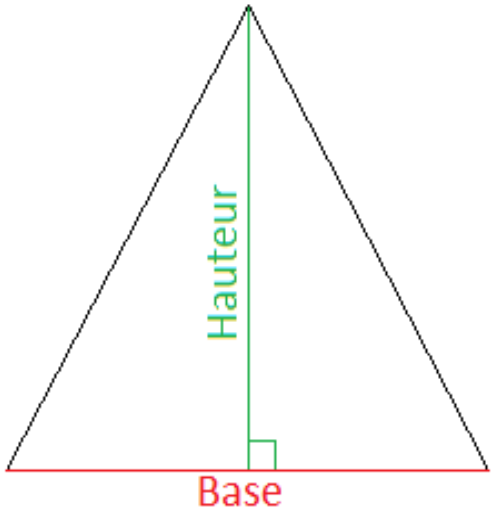


$A = L \times l$

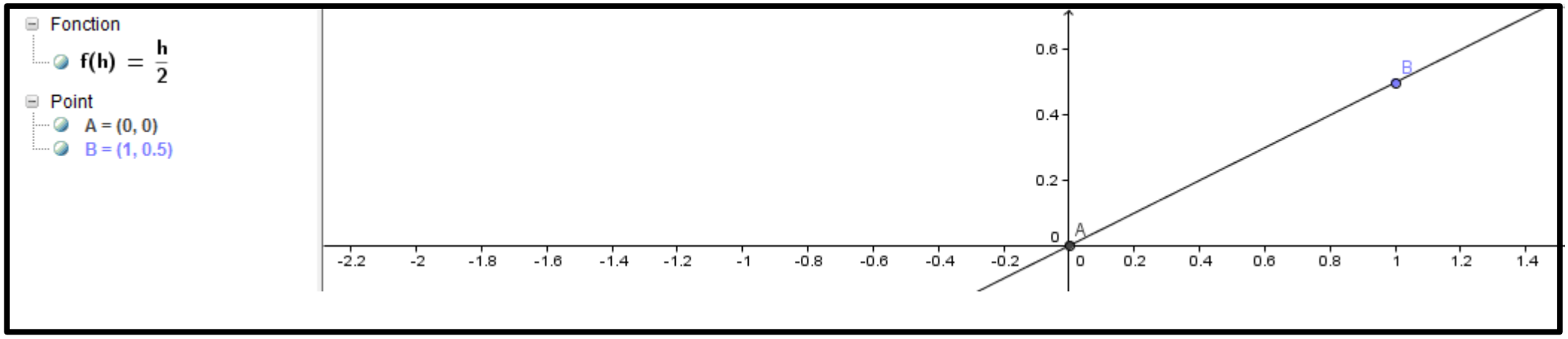


Les Triangles

- Quel triangle a la plus grande aire à périmètre fixé ?



$$A = \frac{\text{Base} \times \text{Hauteur}}{2}$$



Les polygones à *x* côtés

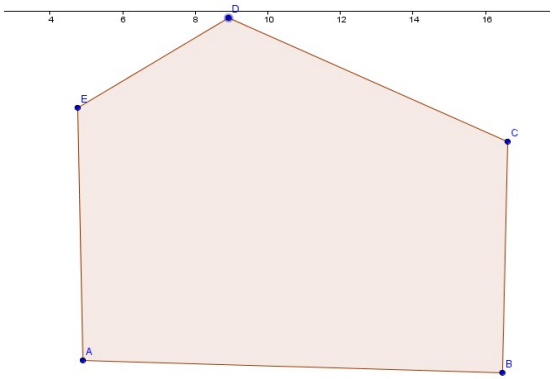


Figure 1

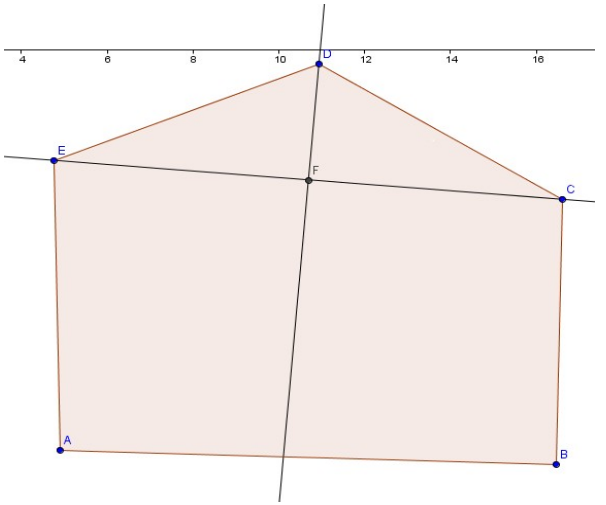


Figure 3

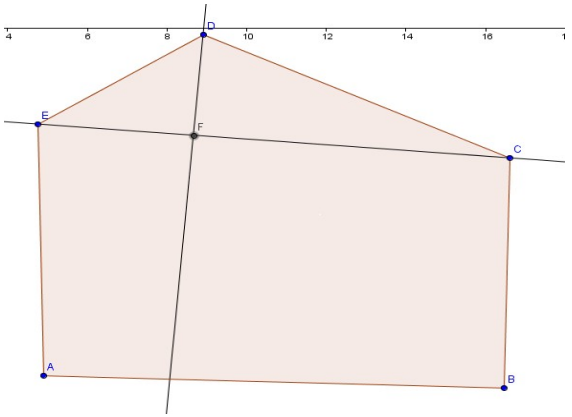


Figure 2

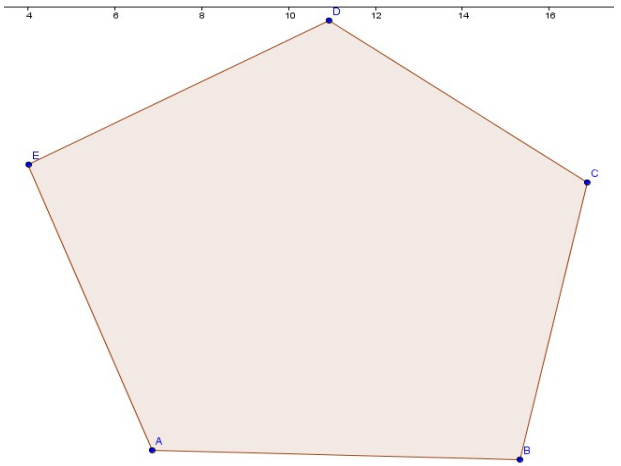
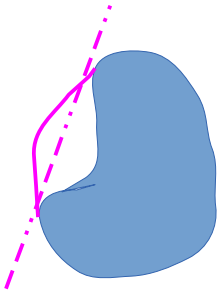
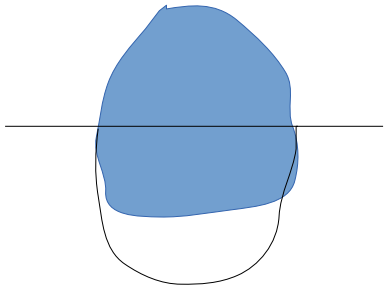


Figure 4

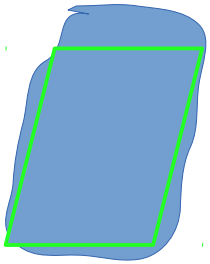
Les formes quelconques



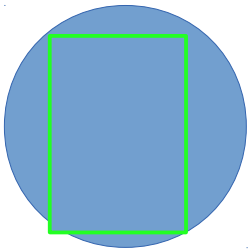
On retire les « creux » en gardant le périmètre



On coupe le périmètre en 2 et on calque la partie qui a la + grande aire



On trace un parallélogramme dans la figure



On transforme le parallélogramme en rectangle de même périmètre