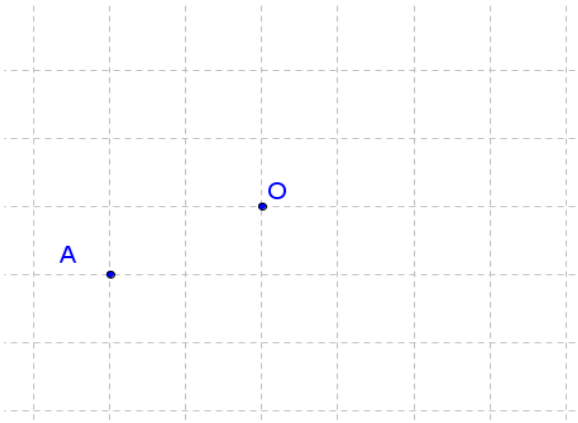
La simmetria centrale: Σ_O

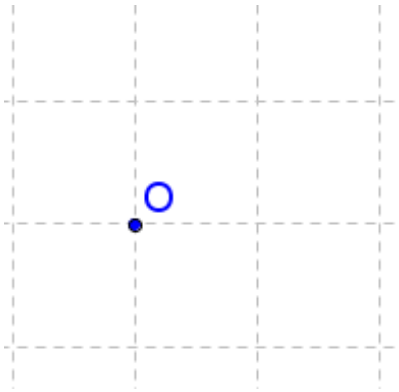
Si legge simmetria centrale di centro O.

1) Il simmetrico di un punto.

i) Costruisci A' = $\Sigma_O\,(A)$

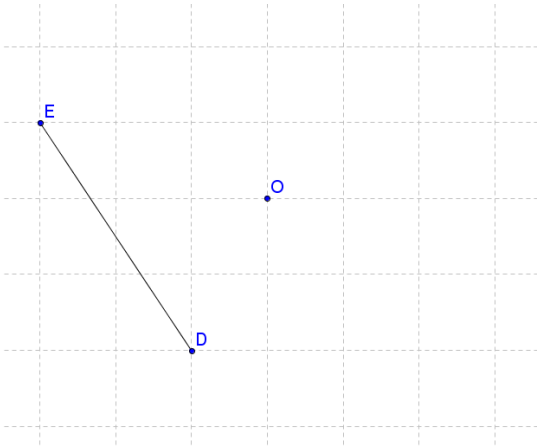


ii) Costruisci O' = $\Sigma_O\,(O)$ Oss:

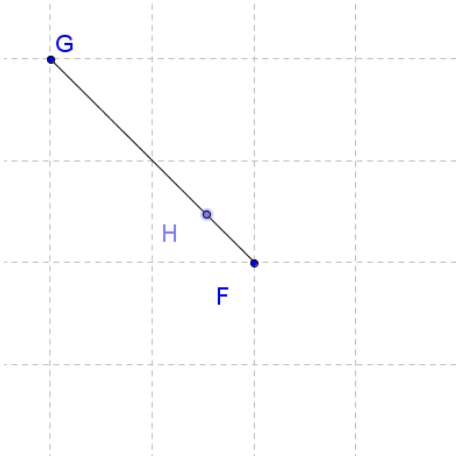


2) Il Simmetrico di un segmento.

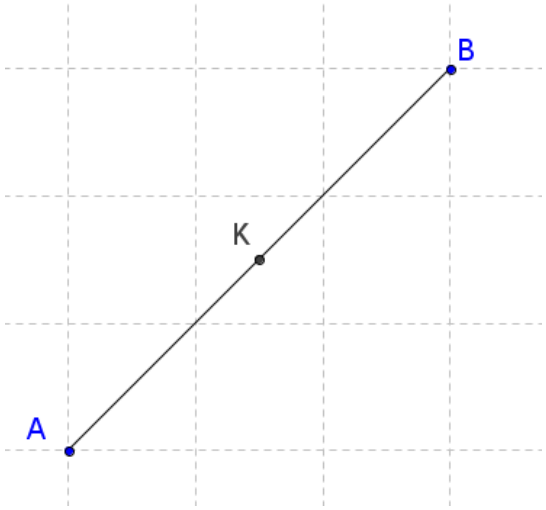
i) Costruisci D'E' = $\Sigma_O\,(DE)$



ii) Costruisci F'G' = $\Sigma_H\,(FG)$

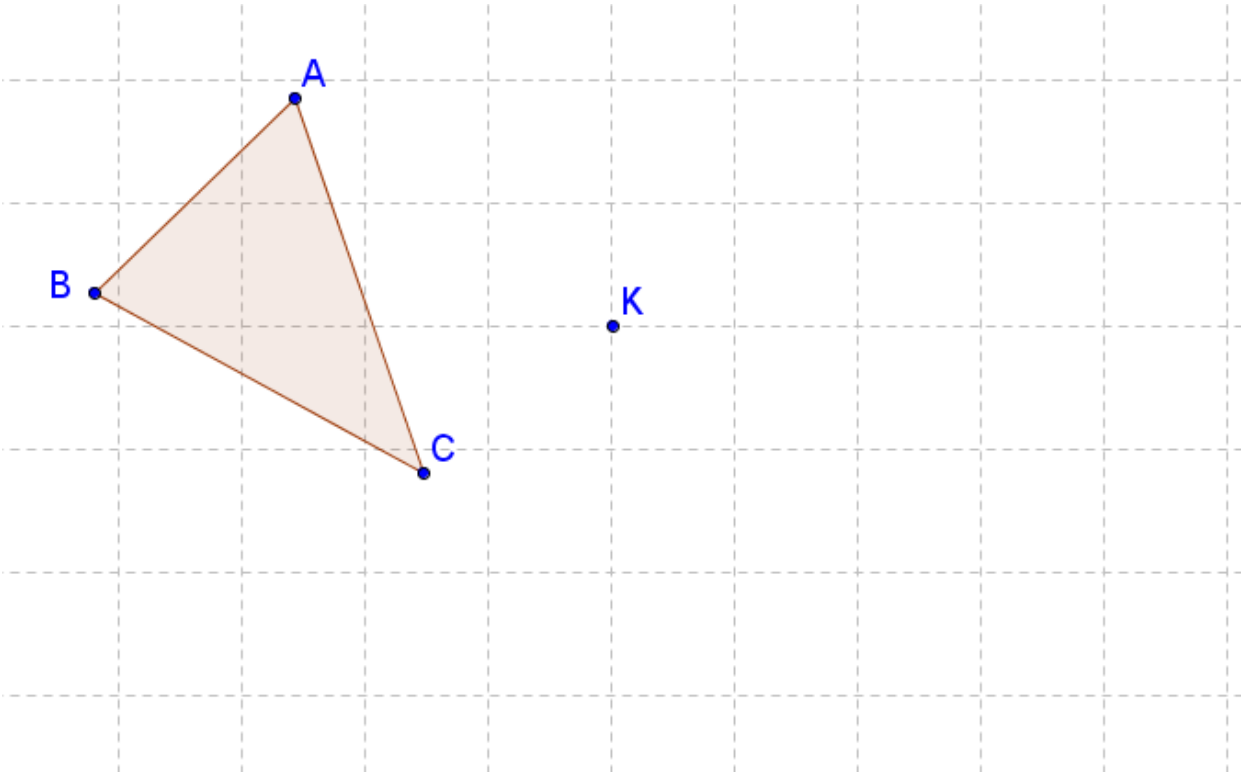


iii) Costruisci A'B' = $\Sigma_K\,(AB)$ Cosa noti?

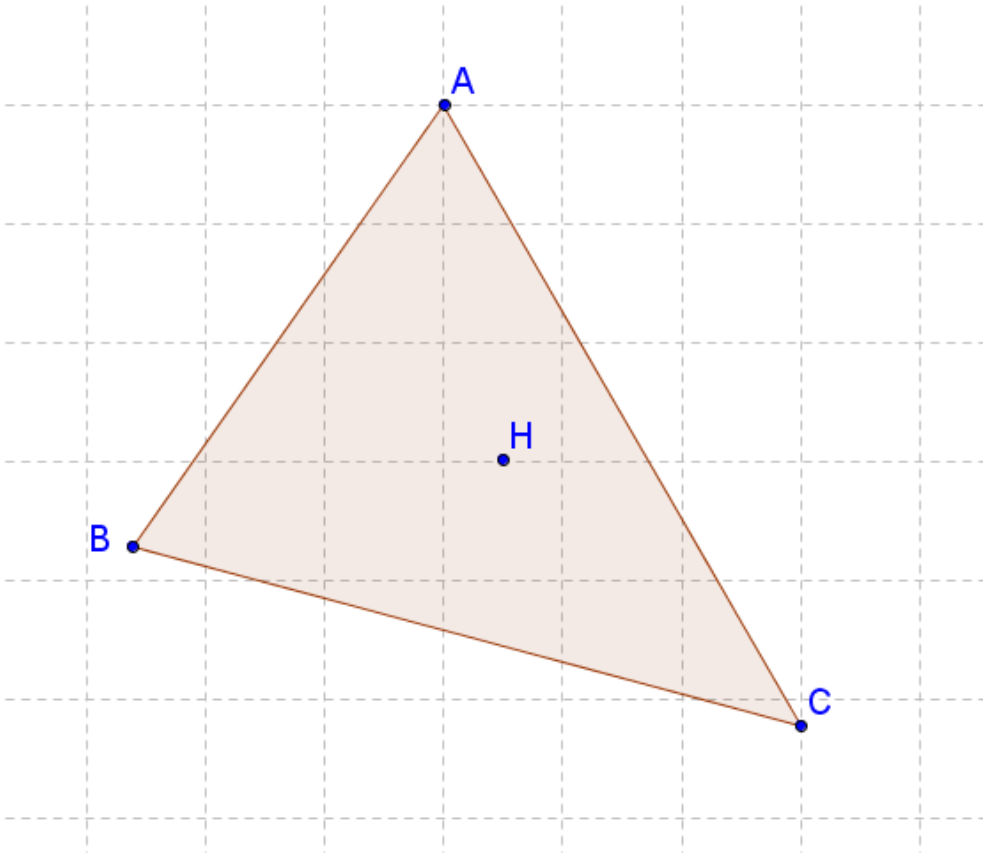


3) Il simmetrico di una figura.

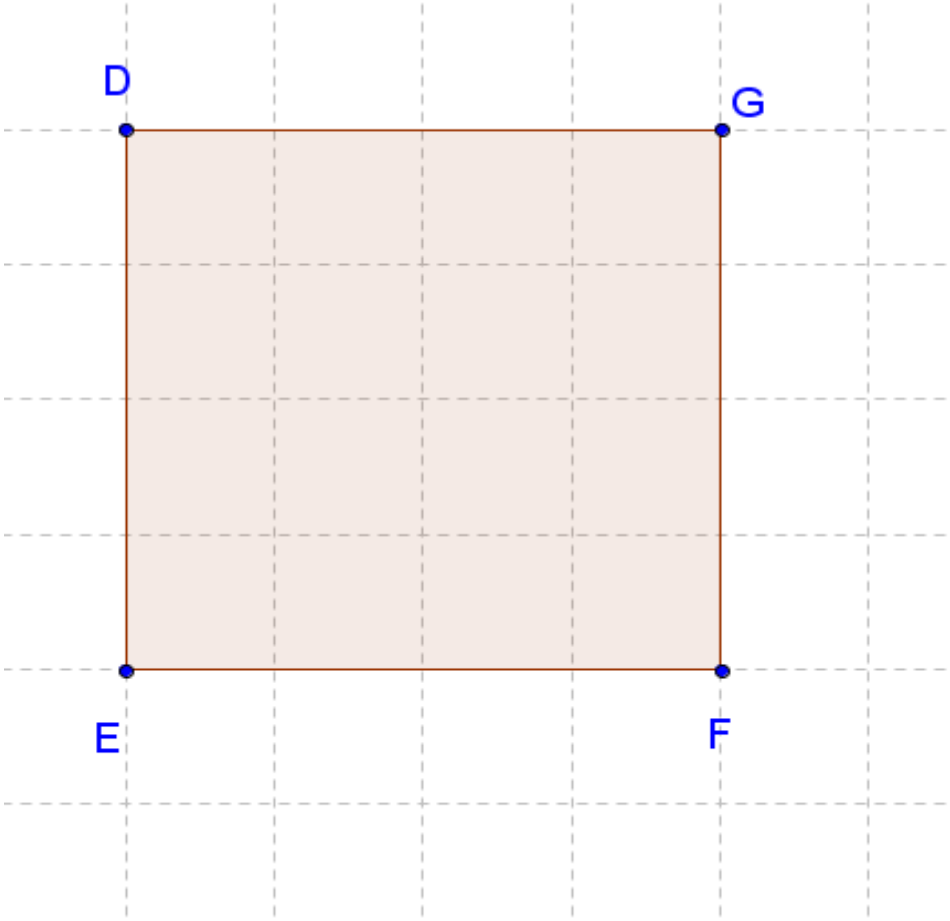
i) Costruisci A'B'C' = $\Sigma_K\ (ABC)$



ii) Costruisci A'B'C' = $\Sigma_H\ (ABC)$



iii) Dato il quadrato EFGH determina il centro K di simmetria che lasci la figura globalmente fissa.



Completa:

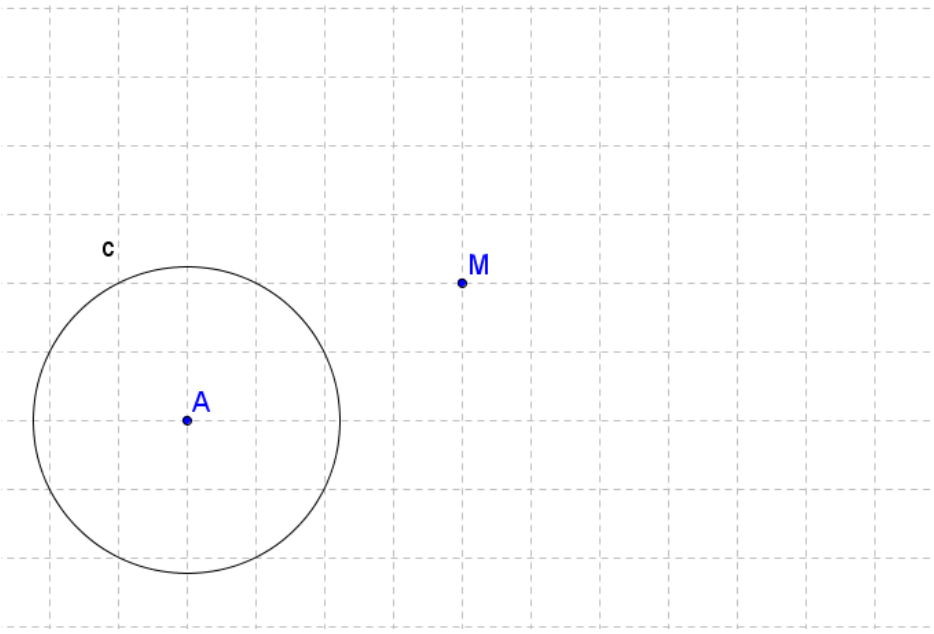
E' = $\Sigma_K\ (E) =$ ... ... ;

F' = $\Sigma_K\ (F) =$ ... ... ;

G' = $\Sigma_K\ (G) =$ ... ... ;

D' = $\Sigma_K\ (D) =$ ... ... ;

iv) Determina il simmetrico del cerchio $\mathcal{C}' = \Sigma_M\,(\mathcal{C})$



4) Il quadrato.

Dato il lato AB del quadrato ABCD costruisci:

a) Il quadrato ABCD, utilizzando la squadra e il compasso.

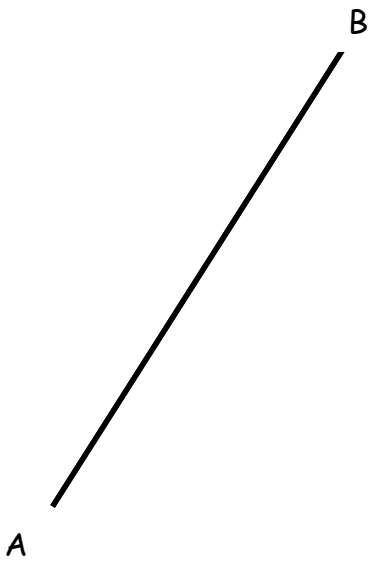
b) Gli assi di simmetria.

c) Il centro di simmetria.

d) La circonferenza inscritta al quadrato.

e) La circonferenza circoscritta al quadrato.

f) Effettuando una simmetria assiale rispetto ad uno dei quattro assi quali sono gli elementi che rimangono invariati? Quali sono quelli invece che cambiano?

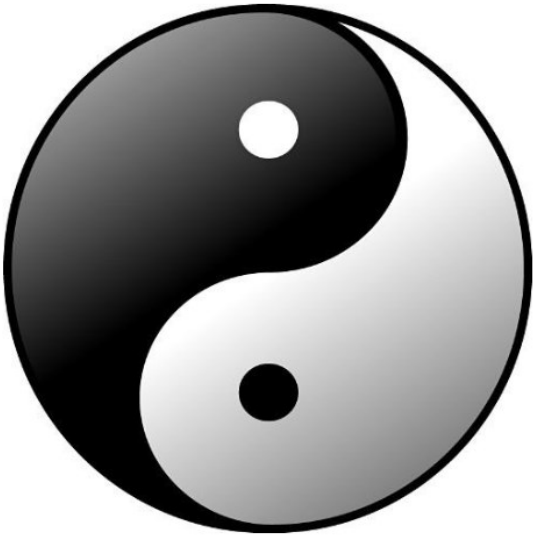


5) La simmetria nella realtà.

Evidenzia eventuali centri di simmetria nelle seguenti situazioni.



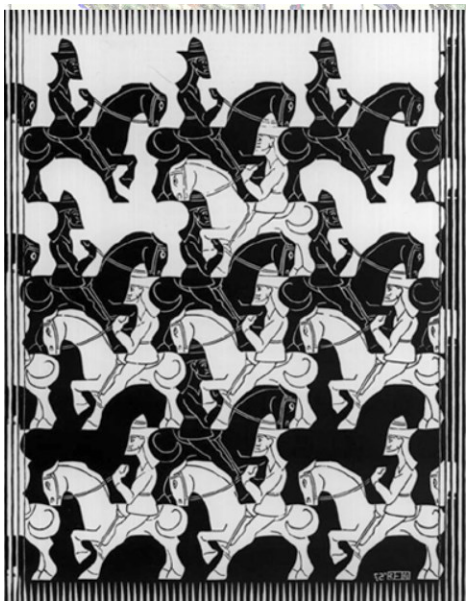
Notre Dame - Parigi



Yin Yan



Palmanova Piazza



Escher - Cavalieri



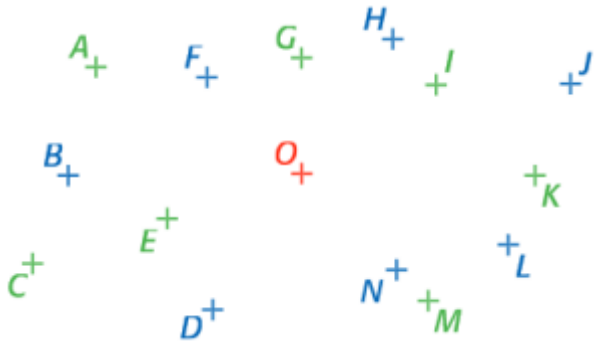
Composizione

6) Cerca delle immagini dove hai una simmetria centrale.

7) Disegna una composizione ottenuta da una simmetria centrale.

8) Exercices.

a) Quels sont les 4 couples de points symétriques par rapport à **O** ?



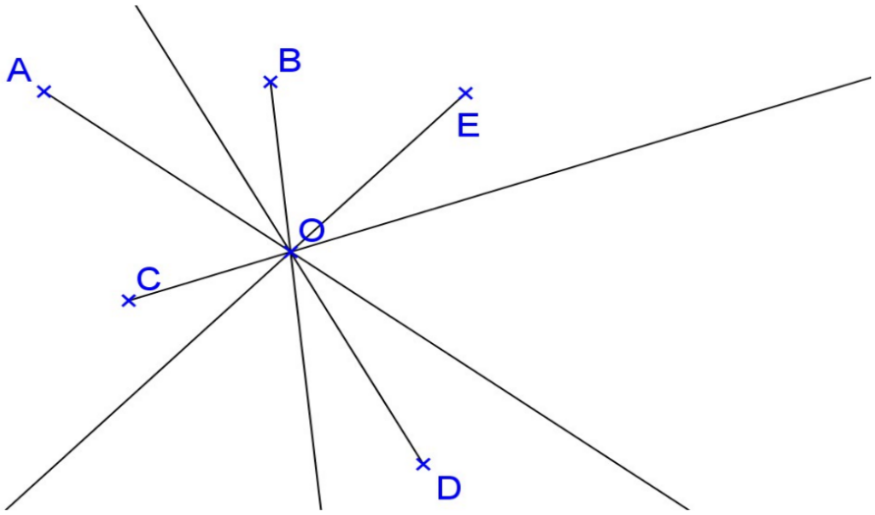
.....

.....

.....

.....

b) Construis le symétrique de chacun des points par la symétrie de **centre O** avec le compas



c) Trace les éventuels axes de symétrie puis les éventuels centres de symétrie.

