
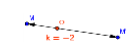





| Expression vectorielle | Figure | Transformations affines |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------|
| $\overrightarrow{MM'} = \vec{U} \Leftrightarrow t_{\vec{u}}(M) = M'$ |  | Translation $t_{\vec{u}}$ |
| $h(M) = M' \Leftrightarrow \overrightarrow{\Omega M'} = k \cdot \overrightarrow{\Omega M}$ |  | homothétie : h de centre $\Omega(\omega)$ et de rapport k |
| $R(M) = M' \Leftrightarrow \begin{cases} \Omega M' = \Omega M \\ (\overrightarrow{\Omega M}, \overrightarrow{\Omega M'}) = \alpha \end{cases}$ |  | Rotation : R de centre $\Omega(\omega)$ et d'angle α |
| $S_{\Omega}(M) = M' \Leftrightarrow \overrightarrow{\Omega M'} = -\overrightarrow{\Omega M}$ |  | Symétrie centrale : S_{Ω} de centre $\Omega(\omega)$ |
| $S_{\Delta}(M) = M' \Leftrightarrow \begin{cases} \overrightarrow{MM'} \perp \vec{U} \\ I \in (\Delta) \end{cases}$ |  | Symétrie Axiale : S_{Δ} d'axe (Δ) |