



For two particles A and B moving in space, we consider the relative motion of B with respect to A , or more precisely, with respect to a moving frame attached to A and in translation with A . Denoting by $\mathbf{r}_{B/A}$ the *relative position vector of B with respect to A* , we have

$$\mathbf{r}_B = \mathbf{r}_A + \mathbf{r}_{B/A}$$

Denoting by $\mathbf{v}_{B/A}$ and $\mathbf{a}_{B/A}$, respectively, the *relative velocity and the relative acceleration of B with respect to A* , we have

$$\mathbf{v}_B = \mathbf{v}_A + \mathbf{v}_{B/A}$$

and

$$\mathbf{a}_B = \mathbf{a}_A + \mathbf{a}_{B/A}$$