Use What You Know in Rectangular Coordinates:

Next, use what you know about the path to find a expression for $d\vec{r}$ along the specific path 4 in the second figure below.

$d\vec{r} =$

This is the line element in rectangular coordinates along path 4.

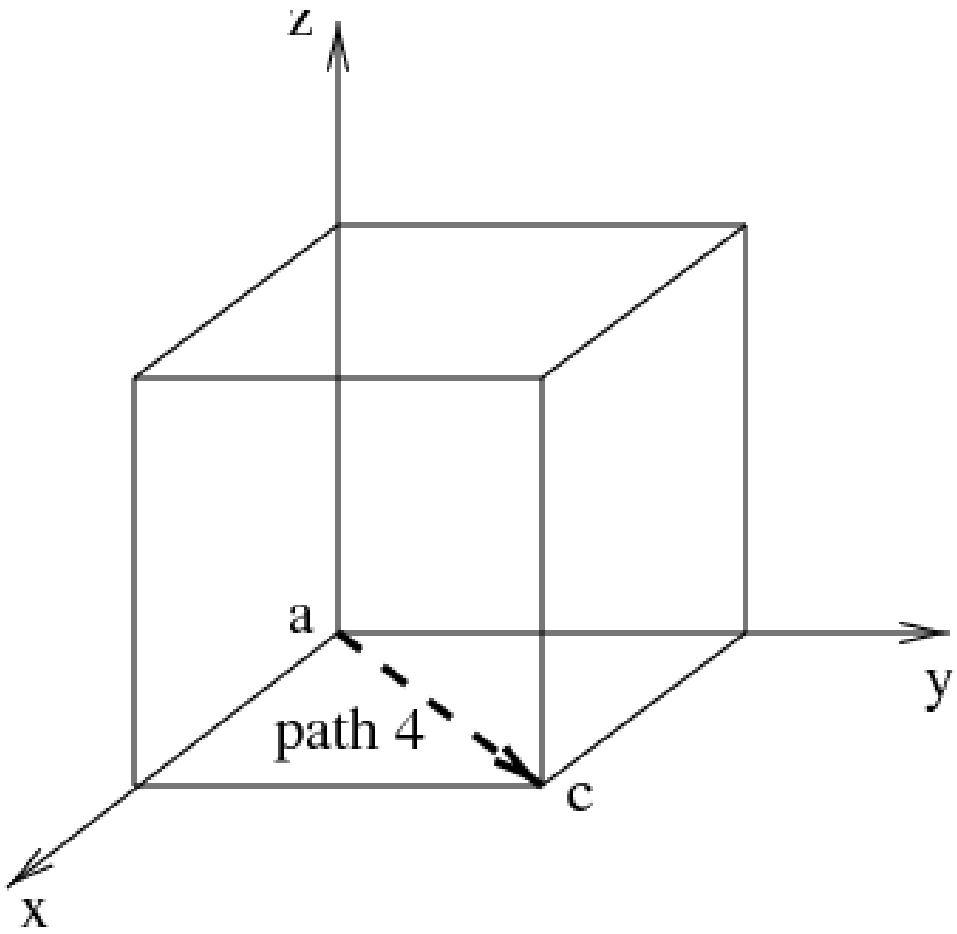


Figure 1: Figure 2: $d\vec{r}$ along path 4