Special Problem 2-5.16

Consider the vector field $\mathbf{A}(\vec{r})$:

$$\mathbf{A}(\vec{r}) = \rho^2 \hat{a}_x + \rho z \hat{a}_y$$

There exists a contour $C$ in space where at every point along the contour, vector $\mathbf{A}$ has the quantity:

$$\mathbf{A}(\vec{r}_c) = 4 \hat{a}_x + 6 \hat{a}_y$$

Describe this contour $C$ mathematically.

**Hint:** How do we mathematically describe/specify contours?