Name:

## I.D. Number:

Consider the following magnetic vector potential, which exists in free space:

$$\vec{A} = 6xyz\vec{a}_x - 3y^2z\vec{a}_y \quad [Wb/m]$$

Calculate the resulting magnetic flux  $\psi_m$  through the rectangular area (S) shown below. The area lies entirely in the y-z plane.

