Special Problem 8-3.3

Two slabs of dissimilar **magnetic** material share a common **boundary**, as shown below.

It is known that the magnetic flux density in region 1 (the left side) is:

$$\mathbf{B}_1(\bar{r}) = 2\mu_0\,\hat{a}_x + 14\mu_0\,\hat{a}_y \quad \left[W/m^2\right]$$

Likewise, a **surface current** $\mathbf{J}_s(\bar{r}) = 4\,\hat{a}_z$ is flowing along the interface as shown below.

In region 2 (the right side), determine (in terms of μ_0):

1) the magnetic flux density.
2) the magnetic field.