

Example 5 Determine whether the gas in the regions depicted in the velocity fields of Figure 17.30 is expanding or contracting.

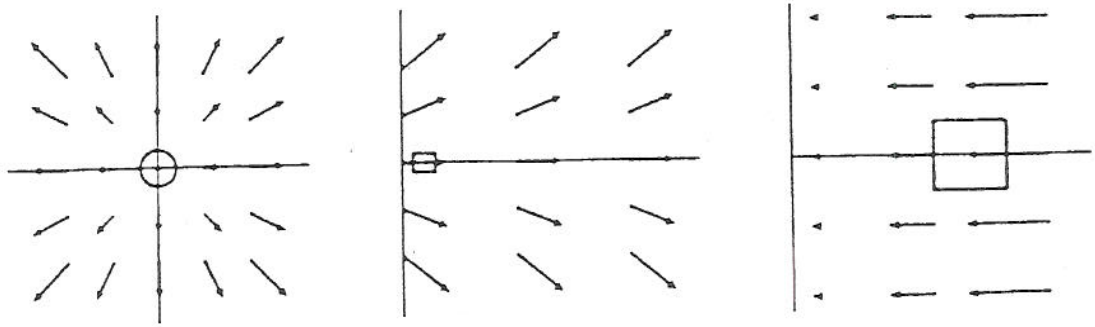


Figure 17.30: Three regions in three velocity fields

Example 7 The velocity field $\vec{v} = x\vec{j}$ is shown in Figure 17.35. Discuss the flow and divergence of this field.

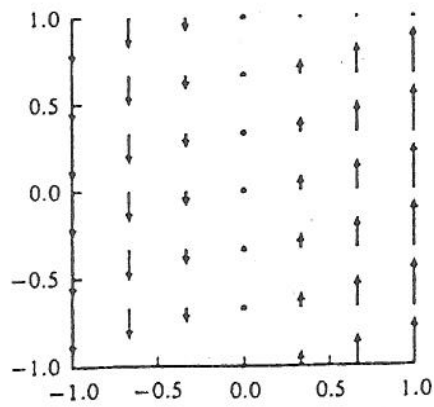


Figure 17.35: The velocity field
 $\vec{v} = x\vec{j}$