A Geometric Description of Span\{u, v\}

Take \(u\) and \(v\) in \(\mathbb{R}^3\), with \(v\) not a multiple of \(u\).

\[
\text{Span}\{u, v\} = \text{plane containing } u, v, \text{ and the origin } 0. \\
= \text{the plane in } \mathbb{R}^3 \text{ spanned by } u \text{ and } v.
\]

**FIGURE 11** Span\{u, v\} as a plane through the origin.

Visualize \(\text{Span}\{u, v\}\) as a plane through the origin, whenever \(u\) and \(v\) are in \(\mathbb{R}^n\) and \(v\) is not a multiple of \(u\).