1. Page 706: # 27.

2. Find the area of the polygon shown below:

![Graph of a polygon with vertices at (-2, -1), (1, 1), (2, 3), (-1, 2), and (1, 2).]

3. Find the angle between these two planes:

\[ x - y + z = 2001 \quad \text{and} \quad 2x + y + 3z + 5 = 0. \]

4. Do these lines intersect? 

\[ l_1 : \begin{cases} x = 2 + 3t \\ y = -1 + 2t \\ z = 4t \end{cases} \quad \text{and} \quad l_2 : \begin{cases} x = 11 + 3t \\ y = 4 + t \\ z = 6 - 2t \end{cases} \]

5. Find an equation of the plane containing the lines \( l_1 \) and \( l_2 \) given by

\[ l_1 : \begin{cases} x = 2 + 3t \\ y = -1 + 2t \\ z = 4t \end{cases} \quad \text{and} \quad l_2 : x - 2 = \frac{y + 1}{2} = \frac{z}{-1}. \]


7. Compute the distance between these two planes:

\[ 2x + y - 3z = 6 \quad \text{and} \quad 2x + y - 3z = 1. \]

8. The vector equation \( \vec{F} = q(\vec{v} \times \vec{B}) \) gives the magnetic force on a charge \( q \) that moves through a magnetic field \( \vec{B} \) with velocity \( \vec{v} \). If \( \vec{v} \) is perpendicular to \( \vec{B} \), solve this equation for \( \vec{B} \) (in terms of \( q, \vec{v} \) and \( \vec{F} \)).