Problem 1.

Sol.: Can BC be large enough?

Problem 11:

Proof: \[ \begin{array}{c}
A \\
M \\
N \\
B \end{array} \]

\[ \text{By similarity.} \]

Problem 13:

Proof: Let two diagonals as \( x \) and \( y \) (in length), then each side \( s = \left( \frac{x}{2} \right)^2 + \left( \frac{y}{2} \right)^2 \)

Problem 22:

Proof: \[ \begin{array}{c}
HG \parallel DB \parallel EF \\
GF \parallel AC \parallel EG \end{array} \]