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SAMPLE WINGS FOR STUDY

John E. Lamar
NASA Langley Research Center

During the Vortex-Lattice Utilization Workshop, the proposal was made that the same sample wings be studied by all those interested in order to gain an appreciation for the accuracy of the various implementations - both old and new - of the vortex-lattice method. Therefore, two simple wings have been selected for which force, moment, and pressure data are available and they are presented in figures 1 and 2.

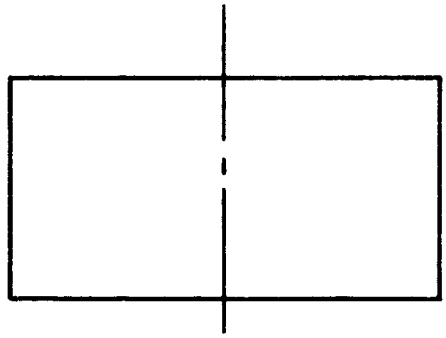

Figure 1.- Aspect-ratio-2 rectangular wing.

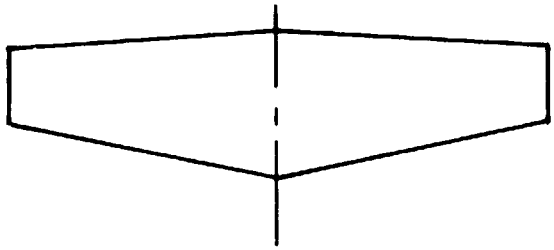

Figure 2.- Aspect-ratio-5 tapered wing. Leading-edge sweep, 3.317°; trailing-edge sweep, -11.308°; taper ratio, 0.5.

Data for the aspect-ratio-2 rectangular wing are found in references 1 and 2, and for the aspect-ratio-5 tapered wing in references 3 and 4.

REFERENCES

1. Fischel, Jack; Naeseth, Rodger L.; Hagerman, John R.; and O'Hara, William M.: Effect of Aspect Ratio on the Low-Speed Lateral Control Characteristics of Untapered Low-Aspect-Ratio Wings Equipped With Flap and With Retractable Ailerons. NACA Rep. 1091, 1952. (Supersedes NACA TN 2347 by Fischel and Hagerman and NACA TN 2348 by Naeseth and O'Hara.)

2. Holme, Olof A. M.: Measurements of the Pressure Distribution on Rectangular Wings of Different Aspect Ratios. FFA Rep. 37, Aeronaut. Res. Inst. of Sweden, 1950.

3. Thiel, G.; and Weissinger, F.: Six-Component Measurements on a Straight and a 35° Swept-Back Trapezoidal Wing With and Without Split Flap. NACA TM 1107, 1947.

4. Thiel, A.; and Weissinger, J.: Pressure-Distribution Measurements on a Straight and on a 35° Swept-Back Tapered Wing. NACA TM 1126, 1947.