# A Simple Construction of the Golden Section 

Jo Niemeyer

Three equal segments $A_{1} B_{1}, A_{2} B_{2}, A_{3} B_{3}$ are positioned in such a way that the endpoints $B_{2}, B_{3}$ are the midpoints of $A_{1} B_{1}, A_{2} B_{2}$ respectively, while the endpoints $A_{1}, A_{2}, A_{3}$ are on a line perpendicular to $A_{1} B_{1}$.


In this arrangement, $A_{2}$ divides $A_{1} A_{3}$ in the golden ratio, namely,

$$
\frac{A_{1} A_{3}}{A_{1} A_{2}}=\frac{\sqrt{5}+1}{2}
$$

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